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# ILLUMINATION CONTROL FOR THE MODERN THEATER



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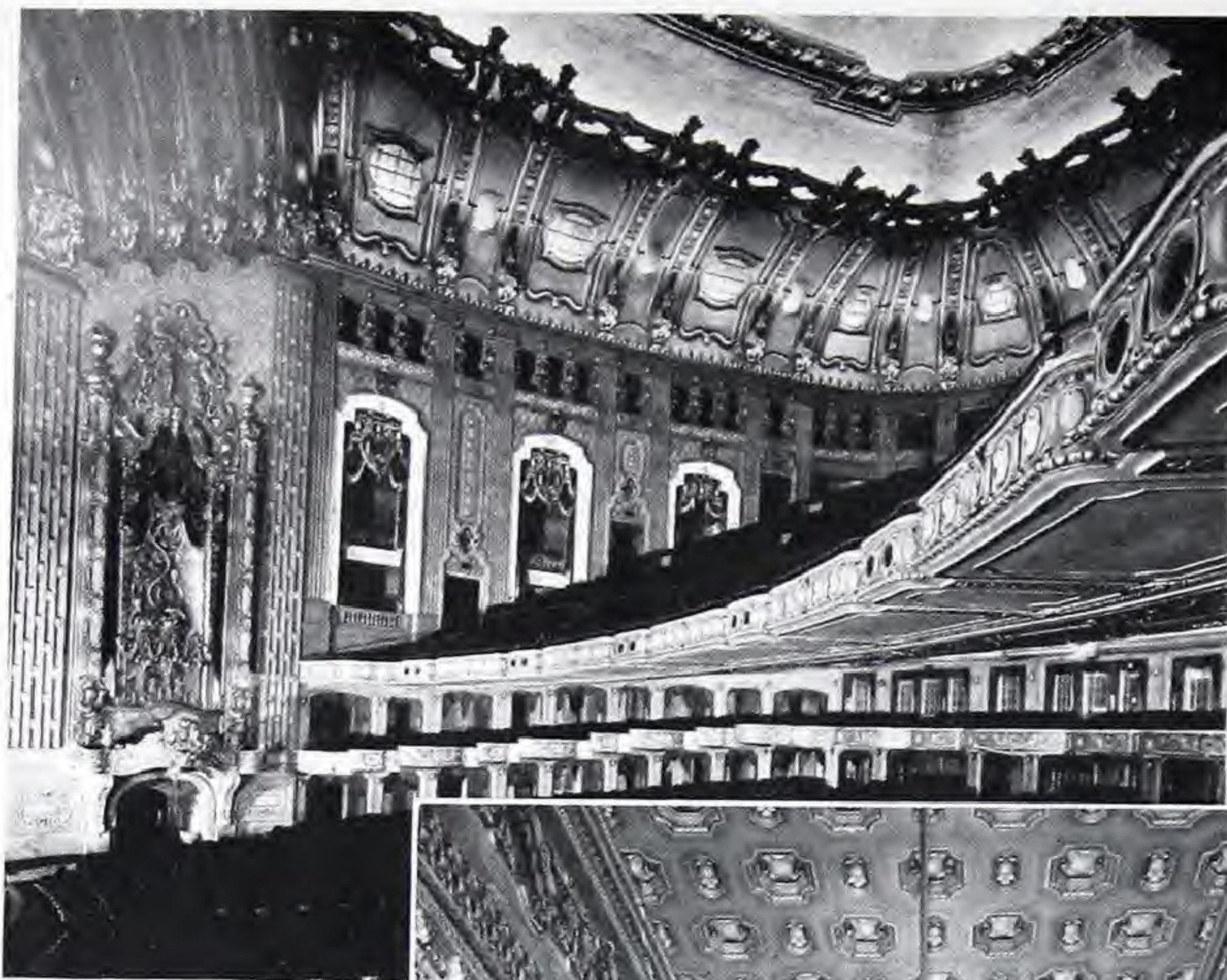
(1926)

# Illumination Control *for the* Modern Theater



*The* **CUTLER-HAMMER Mfg. Co.**  
MILWAUKEE WISCONSIN





*Beautiful architecture and comfortable seating are doubly effective in the theater when the witchery of modern illumination control is employed throughout the house to create an atmosphere of softly changing beauty—suited to the mood of the play progressing on the stage or screen.*



*Whether the theater is small or large, modern control of all lights, throughout the auditorium as well as the stage creates the "atmosphere" which means steady patronage. These views are taken in the Uptown Theater, Chicago. Notice how illumination is provided in the ceiling—all controlled by Cutler-Hammer Dimmers. (Rapp and Rapp, Chicago, Architects).*





# Illumination Control for the Modern Theater

Increasing patronage  
through up-to-date theater dimmer practice.

**L**EAVING behind the cares and worries of the day, the modern audience enters your theater to be entertained. These men and women want to relax, to enjoy themselves and forget their cares and worries. They expect a good show, a good picture or play presented in proper environment. They want surroundings different than ordinary; they have enough of ordinary things every day.

The theater with an entrancingly different atmosphere — such an atmosphere as created by pleasing architecture, decorations, and the effects secured by fitting music and proper lighting — appeals to them. Each has its part in getting your audience to relax and enjoy the performance. They leave the playhouse feeling that they have received their money's worth! — an important consideration because every play or picture can not, alone, appeal to everybody.

Lighting effects are part of the program.

Proper lighting effects have always been one of the essential features of dramatic productions. Even the savages waited for the weird lighting of the moon to hold their most impressive ceremonies. From the earliest miracle plays down to the present day miraculous presentations, the appeal to the eye has been considered an important factor in the theater.

The effect on the audience wrought by shifting color harmonies of light on stage and auditorium is of tremendous power. Accentuating the mood of story or music, these changes of light and color carry the audience on a veritable magic carpet to the "land of make believe".

Modern lighting equipment and control has given theater men of today powerful instruments by which they secure just the effects desired.

The lighting effects and variations made possible by thoroughly modern theater dimmer equipment

are practically limitless. Both stage and auditorium illumination may be controlled at will from a single point — the proper blending, brightening and dimming being available for every change of scene. With each successive number the house may be bathed in whatever glow will best accentuate the mood.

The decorative scheme of the theater may actually be changed to be never twice alike throughout the performance — yet always a marvel of delicate beauty. Hundreds of colored bulbs at every possible vantage point in the theater can be perfectly controlled to create any impression from the palest moonrise to the hot glare of the Sicilian midnoon.

Since electricity was first used for theater lighting, Cutler-Hammer Dimmers have set the standard for proper light control. The present high stage of their development makes possible the marvelous lighting effects which means so much in increased and steady patronage to the theater owner.

Theater dimmers control the volume of light from any group of lamps. They are so connected that the control of all the lights for any one circuit is convenient. See photograph pp. 6. Thus, the Dimmers which control all the foots may be arranged in the first vertical row of dimmer plates, while all the white lights are in the first horizontal row. Next, in the vertical row, come the border lights, and in the horizontal row the blue lights, and so on — with as many vertical rows as there are groups of lights in the house, and as many horizontal rows as there are colors.

All foot lights being together in a vertical row, it is very easy to control the volume of light desired from any particular color of lamp in that group. Cutler-Hammer Dimmers provide means of so interlocking the lights, that by moving one master control lever, the lights on one circuit may be dimmed and those on another brightened. At the same time, the colors of any circuit are likewise dimmed or brightened.

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*Carrying the patrons off to a veritable "Land of Make-Believe," modern lighting control in the Grand Riviera Theater of Detroit contributes largely to the popularity of this house. The intimate feeling created by illumination which makes the entire auditorium a part of the stage has a powerful effect upon the audience.*

*Softly changing light harmonies, masked behind columns and ballustrades, in niches, coves and candelabra enhance the architectural beauty of the theater's interior. Various lighting combinations, playing upon the statuary and decorative detail can give a constantly changing scene throughout the performance.*



*The Grand Riviera Theater, Detroit, John Eberson, Architect, is equipped, as are most of the finer theaters of the country, with Cutler-Hammer "Simplicity" Dimmers. The dimmers and switchboard permits remote control and pre-selection of lighting scenes. They are installed by the Major (F. A.) System.*



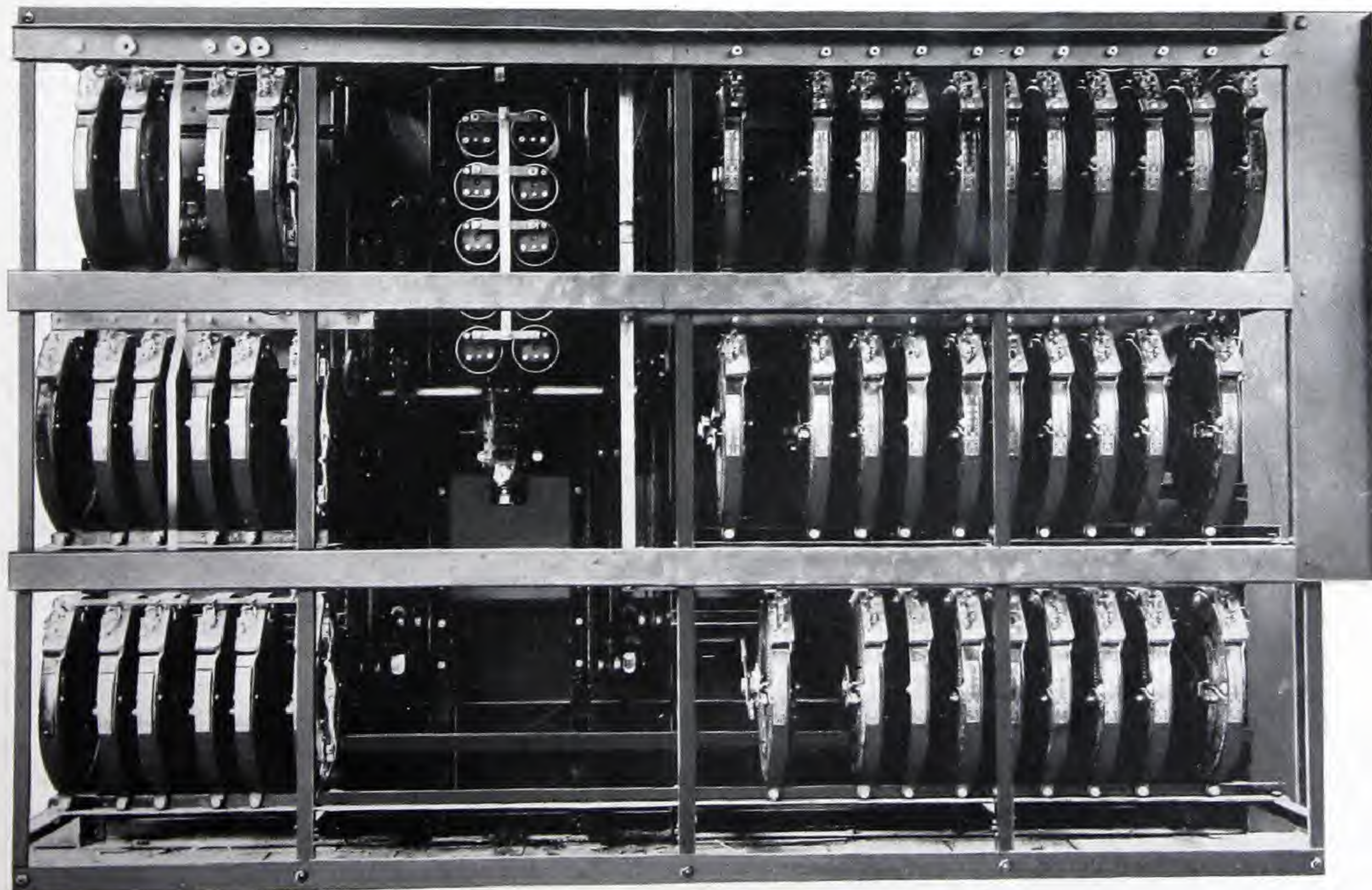
For instance, it may be desired during a scene to dim the white lights in the foots to a combination of amber and blue, with blue predominating; and to change the border lights from a combination of red and green, with green predominating, to a combination of blue and white, with white predominating. This is all done by quickly setting the individual control handles for each bank of lights and then moving the master control. The effect is one of gradual blending of colors from the previous "set-up" to the one desired.

The success which has been achieved in illumination control in the outstanding theaters of the country — most all of which are equipped with Cutler-Hammer Dimmers — is indicative of the possibilities of this profit-making attraction for the smaller house. There is no limitation on the size of the house in which modern lighting control may be used to profit and advantage. It is just as successful in the 300-seat house as in the house with a seating capacity of 5,000 — and no theater regardless of size may be considered "modern" without it.

### Qualities the dimmer bank must possess.

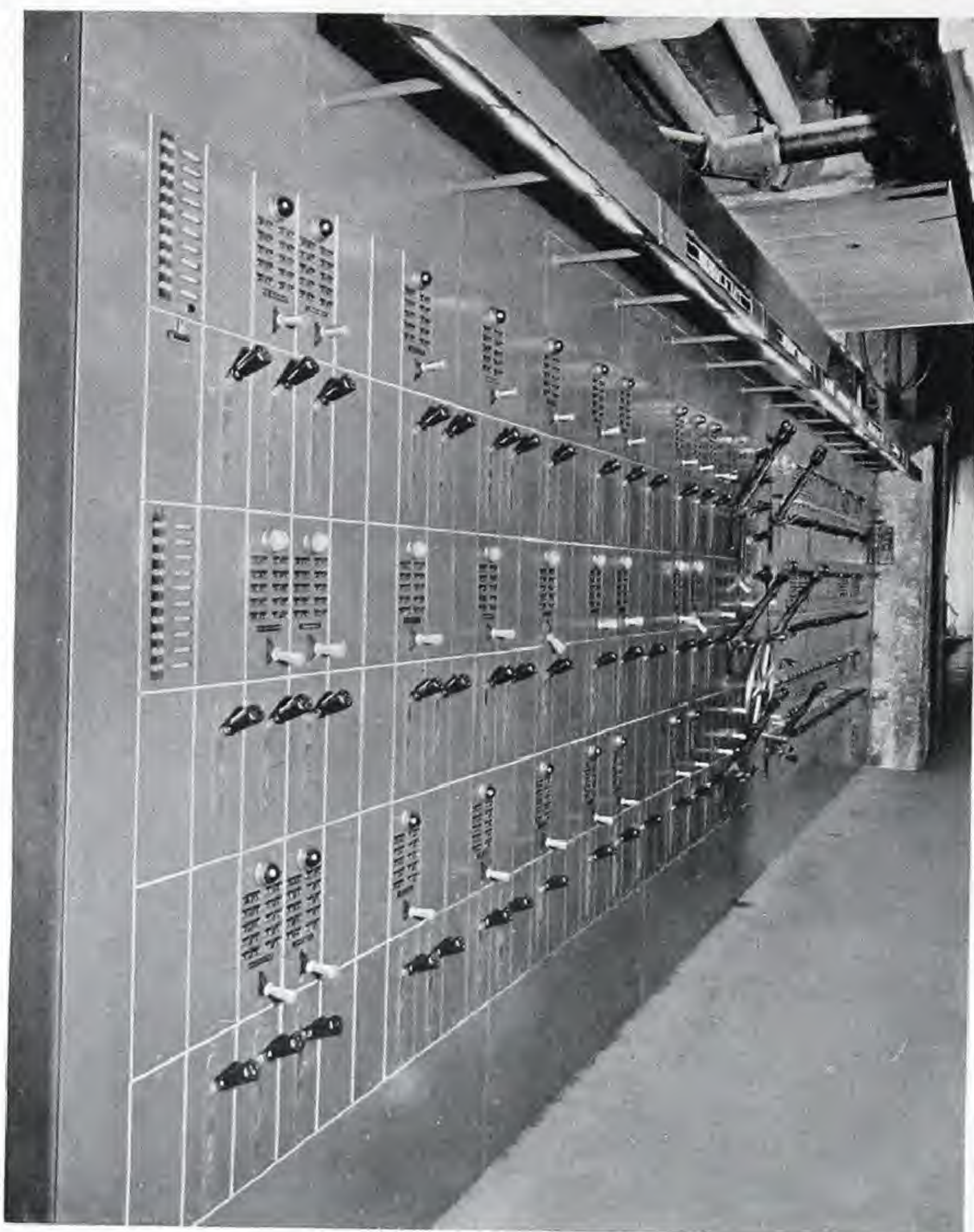
To obtain in the highest degree the marvelous results possible with proper dimming equipment consideration must be given, in their selection and installation, to the technical requirements of this type of apparatus.

The theater dimmer, placed in series with the lamp load to be controlled, introduces a variable resistance into the circuit to dim or intensify the illumination gradually. The full range of control is from "full-bright" to "black-out" within the arc of travel of the dimmer lever. If more resistance than necessary is used, the lamps will be faded out before the lever has completed its travel arc, and the resultant dimming will be jerky or "flickering" and therefore noticeable, instead of smooth, subtle and effective. If less resistance than necessary is used, the lamps will still be luminous when the lever has completed its travel arc, or, in stage parlance, the lamps will not be "black out." It is immediately apparent therefore that for smooth, flickerless operation and subtle color blending the design of the dimmer is extremely important.



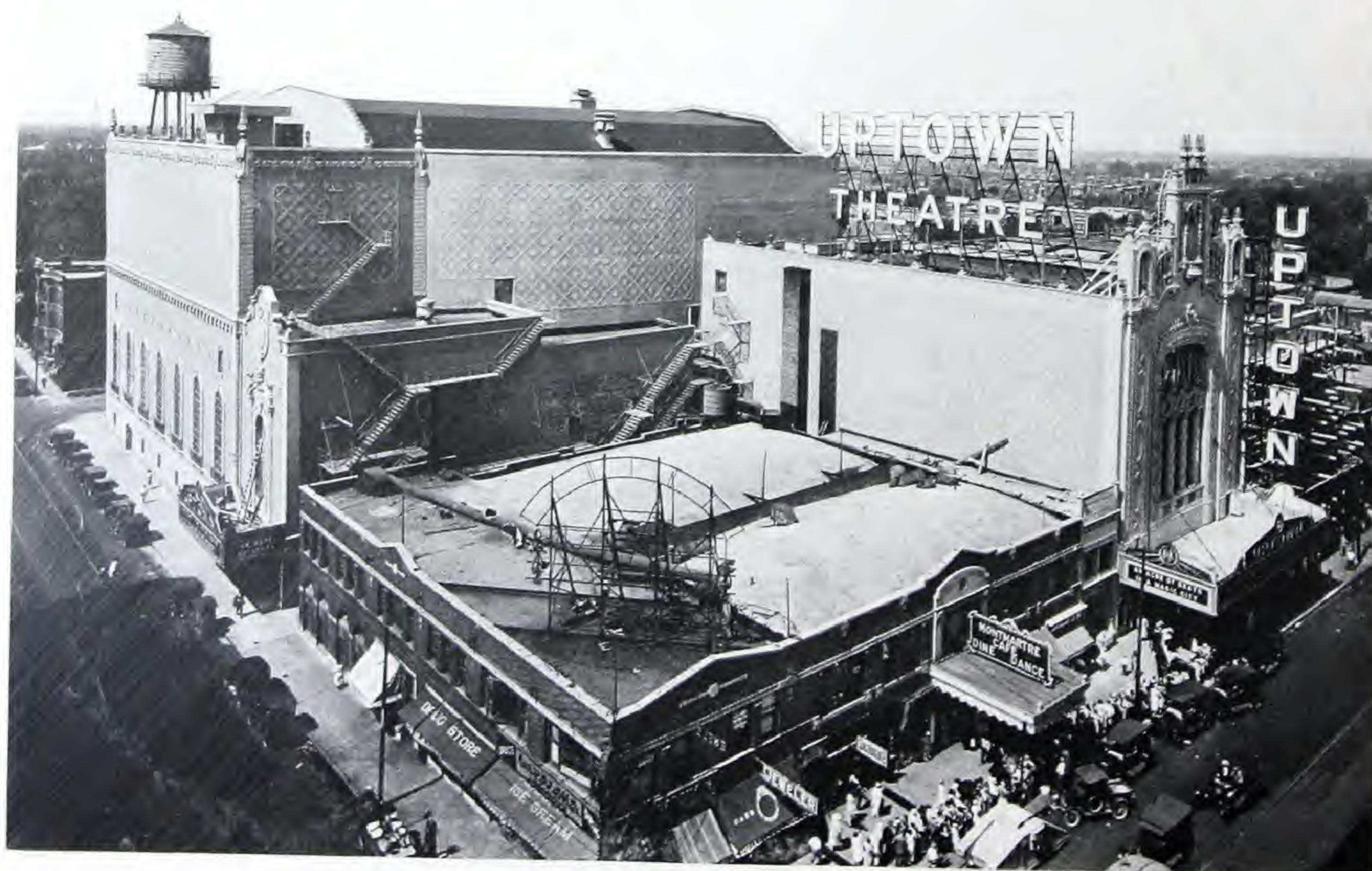
*A rear view of the all-master and modified control pilotboard in the Grand Riviera Theater, Detroit, showing the banks of C-H "Simplicity" Dimmer Plates which control the illumination.*





*At the left is shown the Major (F.A.) System pilot board used in connection with Cutler-Hammer Dimmers at the Uptown Theater, Chicago. With this equipment ten scenes can be set up at one time and any combination of lighting can be controlled entirely by the action of one switch. Scenes may progress forward or backward or in any rotation.*

*The exterior of the theater shown below displays electric signs which have a total connected load greater than the combined sign load on four of Chicago's large legitimate houses. C. W. and George L. Rapp were the architects of this Balaban & Katz theater.*





Accuracy of the dimmer winding, means for dissipating the resultant heat energy and convenient size of unit resistors to permit grouping into large banks, and the possible future insertion of additional units, are vital factors in the design. Ruggedness of construction, convenient, centralized control and silent operation are further essentials. By its very nature being a piece of apparatus subjected to alternating heating and cooling, all combustible material and materials which would deteriorate through continued temperature changes must be eliminated from the dimmer construction.

For flickerless, smooth, fading of the lamps from full luminosity to "black-out" the dimmer winding must be proportioned with the greatest accuracy and designed so that the travel of the hand lever through the course of its arc involves a maximum number of steps, making each individual change in illumination so fine as to be hardly apparent.

How C-H "Simplicity" Theater Dimmers embody these essential qualities and many more is described below:

### Advantages of C-H "Simplicity" Dimmers.

*Flickerless.* A double-ended, balanced contact lever with brushes at either end reduces side wear on the supporting hub and bearing to a minimum in C-H "Simplicity" Dimmers while the use of direct rack and pinion drive completely eliminates back lash and lost motion. There is therefore no overlapping of contact brushes and the operation is entirely smooth and flickerless.

110 steps from full brilliancy to "black-out". The unparalleled smoothness with which C-H "Simplicity" Dimmers "fade" either vacuum or gas filled lamps

from full brilliancy to "black-out" is directly due to the many steps over which the brush contacts travel in their course. This so minimizes each individual change in illumination that it is practically imperceptible to the eye.

By thorough, painstaking analysis and the testing of many different resistance layouts a proportioning of the resistance has been achieved which provides

perfectly equal dimming throughout the 110 steps from full brilliancy to "black-out."

*Velvet control.*—

Smoothness of action at the operating lever is essential to obtain velvet-like changes in illumination no matter how perfectly the resistor element may be designed to give suitable dimming.

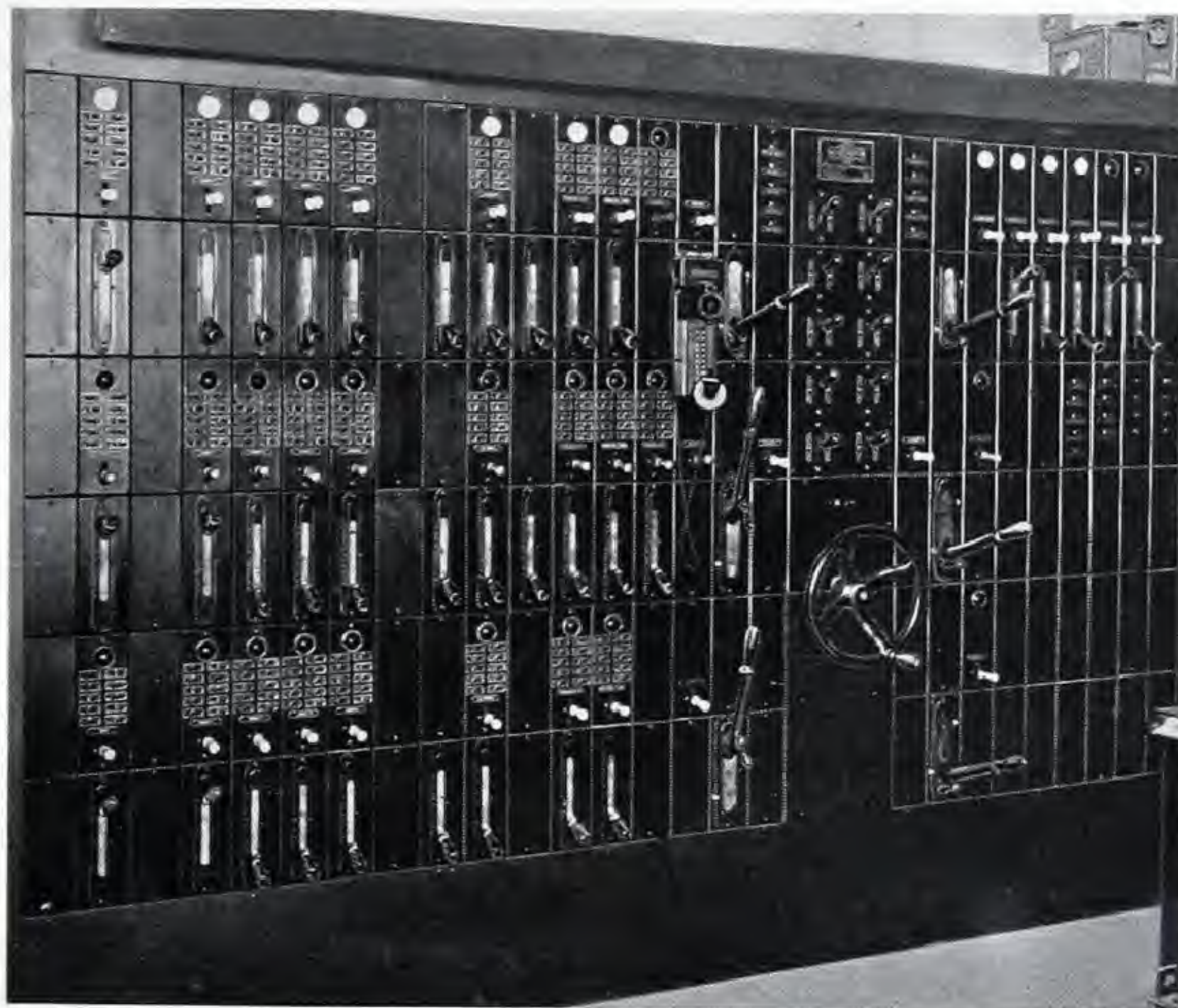
This is accomplished in the C-H "Simplicity" Dimmer by the direct acting rack and pinion drive and the self lubricating contact construction. The rack rod guide holds the

rack and pinion in close relation without excessive friction and the pitch of the pinion and rack teeth has been worked out to provide a perfect mesh. Because of the small amount of power necessary, the teeth require no lubrication.

The length of the operating levers makes it possible to obtain very gradual movements, eliminating jerky motions and consequent poor dimming effects.

In connection with these levers it should be noted that while the contact lever moves through an arc of 180 degrees, the throw of the operating lever is only 55 degrees, the angular motion of the latter being multiplied by the rack of the driving rod and the pinion which revolves the contact lever. The operator is thus required to move the lever a comparatively short distance through an arc which comes conveniently to his hand.

*Cophite contact brushes—self-lubricating.* The scientific combination of graphite and copper ("Cophite")



*The C-H Magnetic Switches used in conjunction with C-H Dimmers in the Grand Riviera Theater, Detroit, which permit pre-selection and remote control of lighting scenes. This is a Major (F. A.) Board.*





*The Tivoli Theater, Chicago, Rapp & Rapp Architects, is equipped with a bank of 130 C-H "Simplicity" Dimmer Plates employing 98 Individual levers controlling the lights throughout the house and stage through a Major (F. A.) switchboard. Three crystal chandeliers in the lobby of this house, each 15 feet high, are provided with 3-color lighting equipment which gives very beautiful effects. The lobby is a replica of the peace treaty hall in Trianon Palace, Versailles.*

*The seating capacity of this house is 4500.*

*The Chicago Theater is another of the many Chicago houses which find that C-H Dimmers "best meet the requirements" of modern day lighting practice.*



*The Capitol Theater, Chicago, is another typical Cutler-Hammer installation of merit. C-H Dimmers provide the ease of control necessary to produce the various color harmonies.*



of which the contact brushes are formed, combines the continuous lubricating qualities of graphite and the perfect commutating property of copper. This brush operates with less noise, less wear and less friction than any material yet discovered for the purpose.

The stationary contact buttons are of brass, ground to a smooth, even surface. They do not oxidize as copper and thus minimizes heating at the brushes. The pressure spring is located away from the dimmer plate and subjected to the least amount of heat.

*Designed for continuous duty and severe service.* C-H "Simplicity" dimmers are designed for the continuous, severe, long-hour service to which moving picture houses in particular subject them.

The construction and material of the dimmer resistance plates have the ability to withstand accidental or temporary abnormal loads, such as exist in theater practice.

*Do not overheat or burn out.* All parts of a theater dimmer are subjected to alternate heating and cooling. For this reason material which does not deteriorate through the temperature changes is used in making C-H "Simplicity" Dimmers.

The bases of the dimmer plates are of soapstone. This material has a very high continuous load capacity because of its high heat absorbing characteristics.

The soapstone plate has high insulating qualities, which combined with its ability to absorb heat, means that C-H Dimmers are ideal for continuous service. This is an important feature in modern dimmer practice.

The contact brushes are carried in an all-metal arm and the terminals are held in position in a heat resisting terminal block of moulded insulation.


*Terminals mounted on solid block of insulation.* Wiring terminals of C-H Dimmers are mounted on a solid block of moulded insulation eliminating the necessity of insulating bushings and removing the possibility of grounds. The terminals are placed at least one-half inch from any grounded metal. They are readily accessible for wiring and thus make installation costs so much less.

*Current carrying parts perfectly insulated.* All the current carrying parts are perfectly insulated from the operating levers, rack rods, pinions, frames, etc. making C-H "Simplicity" Dimmers thoroughly safe for the operators and eliminating the possibility of short circuits.

*Compact.* The standard C-H "Simplicity" Dimmer Plates are constructed with a view to compactness in every detail commensurate with strong, accurate construction, and the incorporation of a sufficient number of steps to insure gradual, flickerless dimming. This compactness insures ease of installation in limited space.

Up to certain load ratings C-H Dimmers can be supplied with a different winding on each side. This gives the dimmer three different lamp capacities, a feature which every electrical man will recognize as making for compactness in installation. It is possible, due to the ability of the soapstone bases to stand very high heat without burning out.

## Refinements of control permit every lighting combination

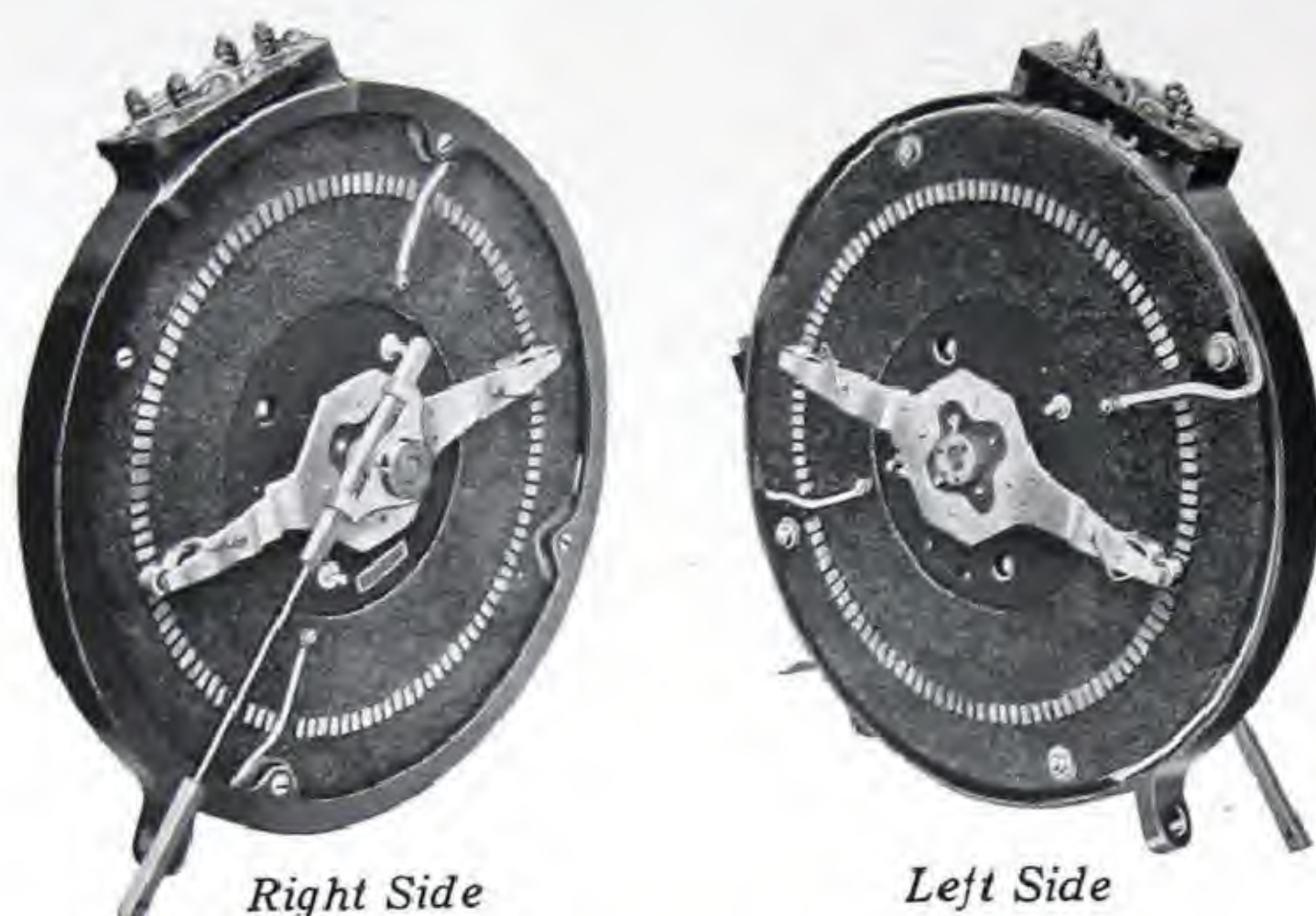
HE C-H "Simplicity" Dimmers, placed in numerous banks and rows, vertically by circuits and horizontally according to color, permit every conceivable combination in lighting and dimming through the various master and interlocking controls which have been devised. The interlocking, non-interlocking, cross interlocking, individual color master, grand master and slow motion individual color control together with the slow motion, grand master interlocking and slow motion cross interlocking controls have all been worked out as standard features of C-H Dimmers.

By means of these various controls the dimmers may be operated individually or ganged together to dim or brighten any combination of circuits or colors.

The interlocking mechanism makes it possible to control all the lights of a certain color simultaneously, or a particular group of the lights together without affecting the remaining lights in the circuit, or to raise some of the lights of the circuit partially in advance of others of the same color and then, after an interval, to bring all the lights of that color up to full candle power.

The plates controlling the lamps which are to be





*The high heat absorbing and insulating qualities of the soapstone base used in C-H "Simplicity" Plates permit the placing of resistance windings on both sides of the plate up to certain capacities. This double sided, two-lever dimmer is a great space saver and can handle loads of three different capacities efficiently.*

brightened in advance of the others are first operated by means of their individual levers. When the moment arrives for brightening the other lamps, the master lever is called into service to operate in unison all the plates interlocked with the shaft.

The plates which control the lamps which have already been partially brightened will not be in interlock at first, but as the shaft is revolved by the master lever the cams fixed to this shaft are turned until a point is reached where the slot in each cam comes under the corresponding bolt of the individual levers which were first raised. These bolts will then drop into the slot, interlocking the individual levers with the shaft. From this point on the lamps controlled by the newly interlocked plates will respond to the master lever.

Thus the operator is enabled to set individual levers at points giving various degrees of illumination and then pick up one after another by employing the master lever alone.

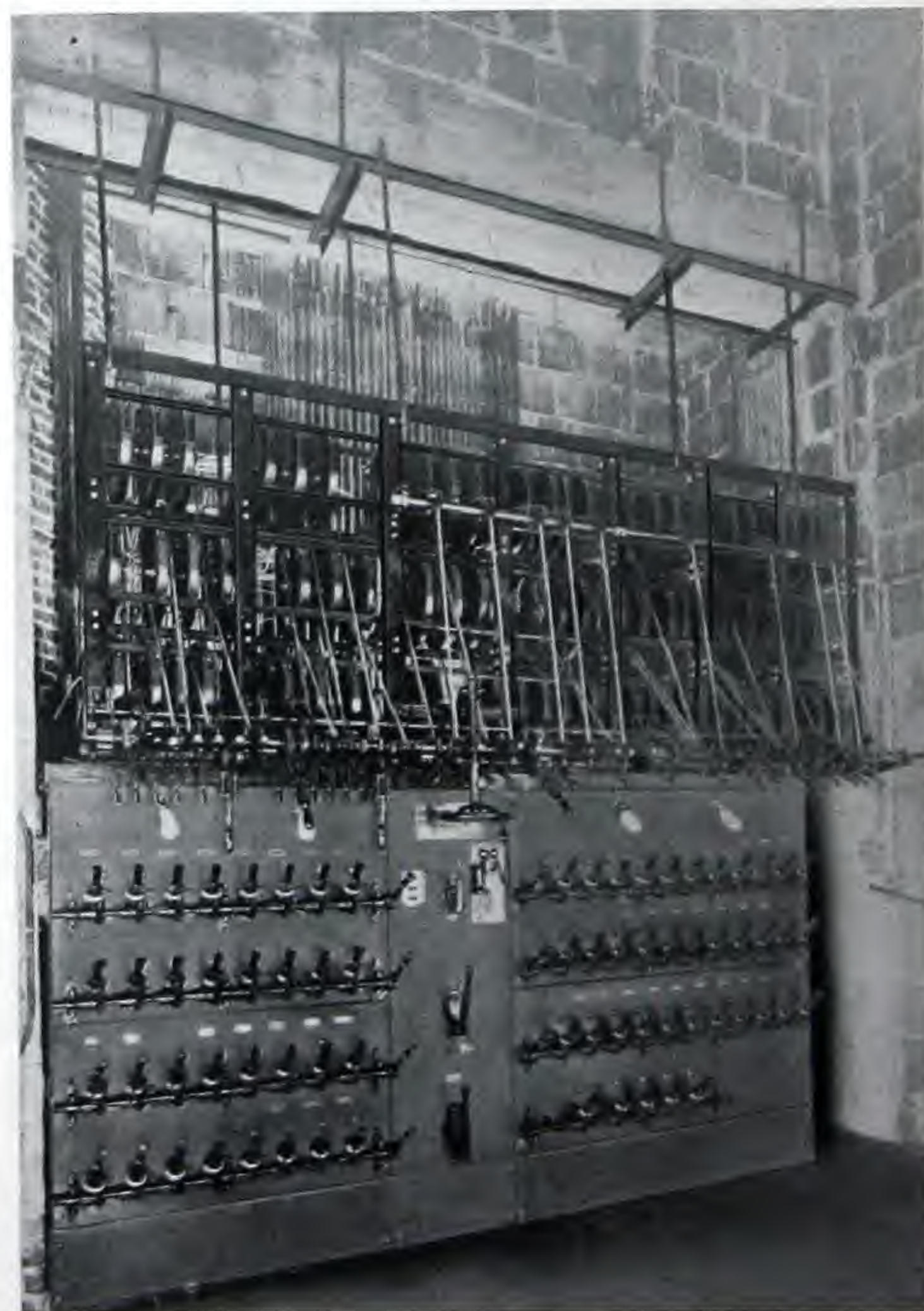
Any or all of the plates in two or more horizontal rows may be similarly operated in unison by means of a grand master lever working through bell crank connections between the horizontal interlocking shafts. Thus certain groups of red lamps may be brightened simultaneously with certain groups of blue by throwing these particular groups into interlock in their master lever shafts and operating the two master levers together by means of the grand master lever.

A still further refinement of control is obtained by the hand wheel drive, which makes it not only possible to dim or brighten any number of lamps at

one time, but also to dim some and brighten others at the same time. In addition to this advantage, the wheel drive possesses the merit of enabling the operator to obtain a slow, smooth motion causing the lamps to glow or fade by imperceptible degrees. Thus white lamps may be dimmed and amber lamps brightened at the same time to simulate twilight effects; amber lamps dimmed and red lights brightened at the same time for sunset; red lamps may be dimmed and blue lights brightened for moonlight.

With such an equipment as is illustrated on page 11, any of the following combinations can be obtained:

1. Any single plate can be operated alone by means of an individual lever.
2. All plates in any row can be operated in unison by means of the master lever, in the center of each row.
3. Any number of plates in any row can be interlocked and operated in unison by the master lever while other plates in the same row, but not interlocked, remain inoperative.
4. All plates in any two rows or in all three rows can be interlocked and operated in unison by the master wheel.
5. Any combination of plates in any two rows or in all four rows can be interlocked and operated in unison by the master wheel, while plates not interlocked remain inoperative.
6. By rotating the handle of the master levers, shafts may be thrown into or out of interlock with either of the two vertical driving rods, enabling operator to dim any combination of lamps and at the same time brighten others.



*Showing the banks of C-H Dimmers installed above the Mutual-built switchboard in the National Theater at Richmond, Va. The slow motion hand wheel may be seen at the center of the row of control levers above the board.*



## Classification and comparison of C-H Dimmer Types



CUTLER-HAMMER theater dimming apparatus is varied and complete to meet every set of operating conditions with the one most efficient type of illumination control, to give the results desired.

Broadly divided into the resistance and the reactance types, C-H Dimmers are provided in the following forms:

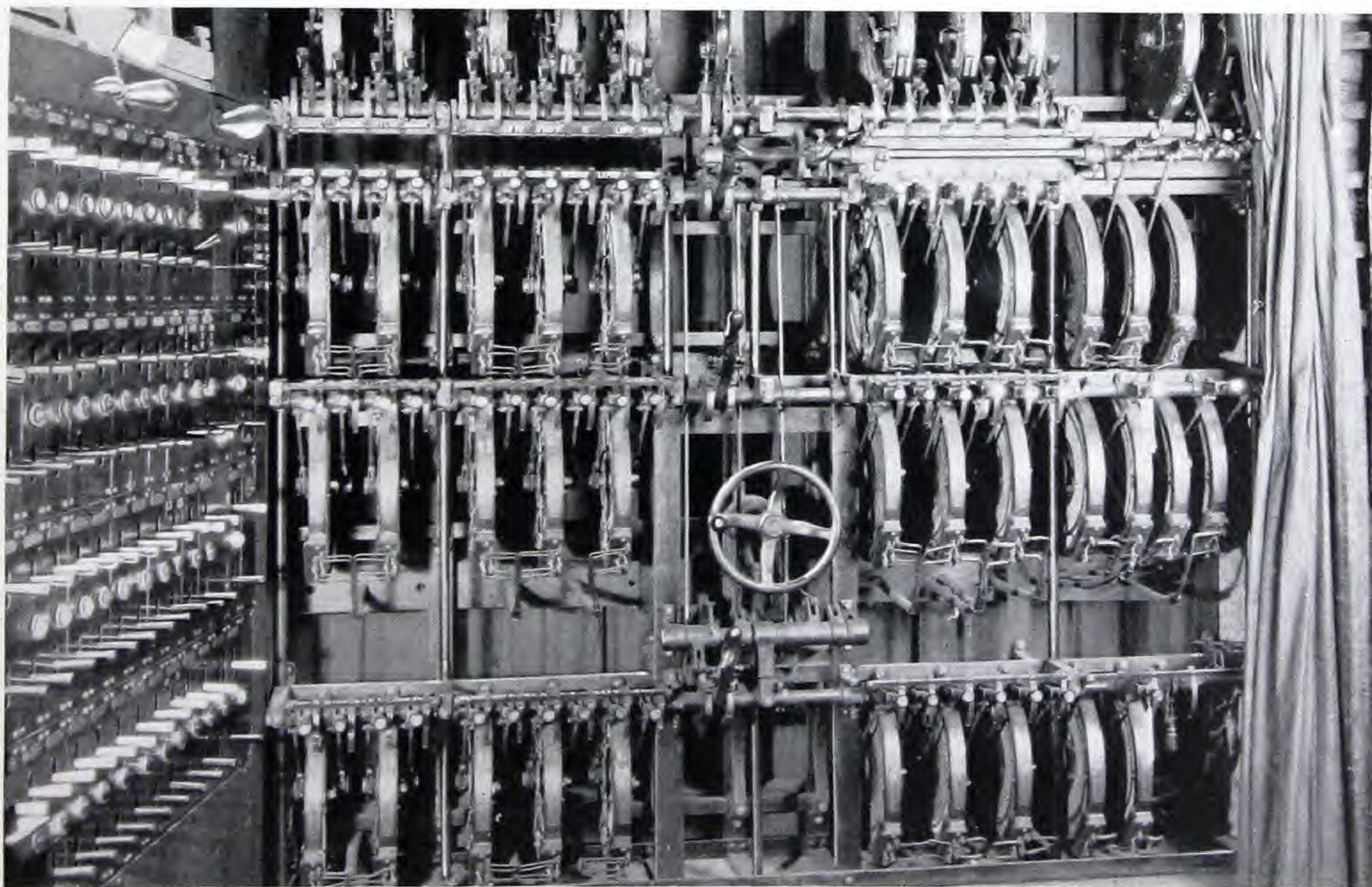
*Resistance type circular plate "Simplicity" Dimmers.* This is the type in practically universal use today as the many installations pictured in this booklet indicate. This plate is designed as a unit for mounting in banks as shown. They are arranged for interlocking.

*Resistance type Circular plate individual dimmers.* This type of plate is for churches, halls, lodges and other small public or semi-public auditoriums where the control of a single circuit only is required. They cannot be interlocked. The resistance is designed to dim the rated load to a dull cherry red instead of black out.

*Resistance type slider dimmers.* This unit (see under "portable Dimmers") is designed for mounting on spotlight pedestals, its shape being such as to suit it for direct mounting. It is operated by means of a slider handle moving up or down. This motion does not sway or upset the lamp. Slider dimmers may also be mounted in gangs for special lighting control in small halls.

*Motor driven dimmers.* These are comparatively small units particularly suitable for lodge halls, hotels, salesrooms, lobby displays, in the foyer of a theater and in connection with various attention compelling devices. Standard circular plate "Simplicity" Dimmers are employed and operated by small motors controlled from conveniently located push buttons.

*Reactance type dimmers.* This type of dimmer is particularly applicable where space is limited and where a number of large circuits are to be controlled. The dimmer may be installed in a basement or other out of the way place with a small control board located where convenient.



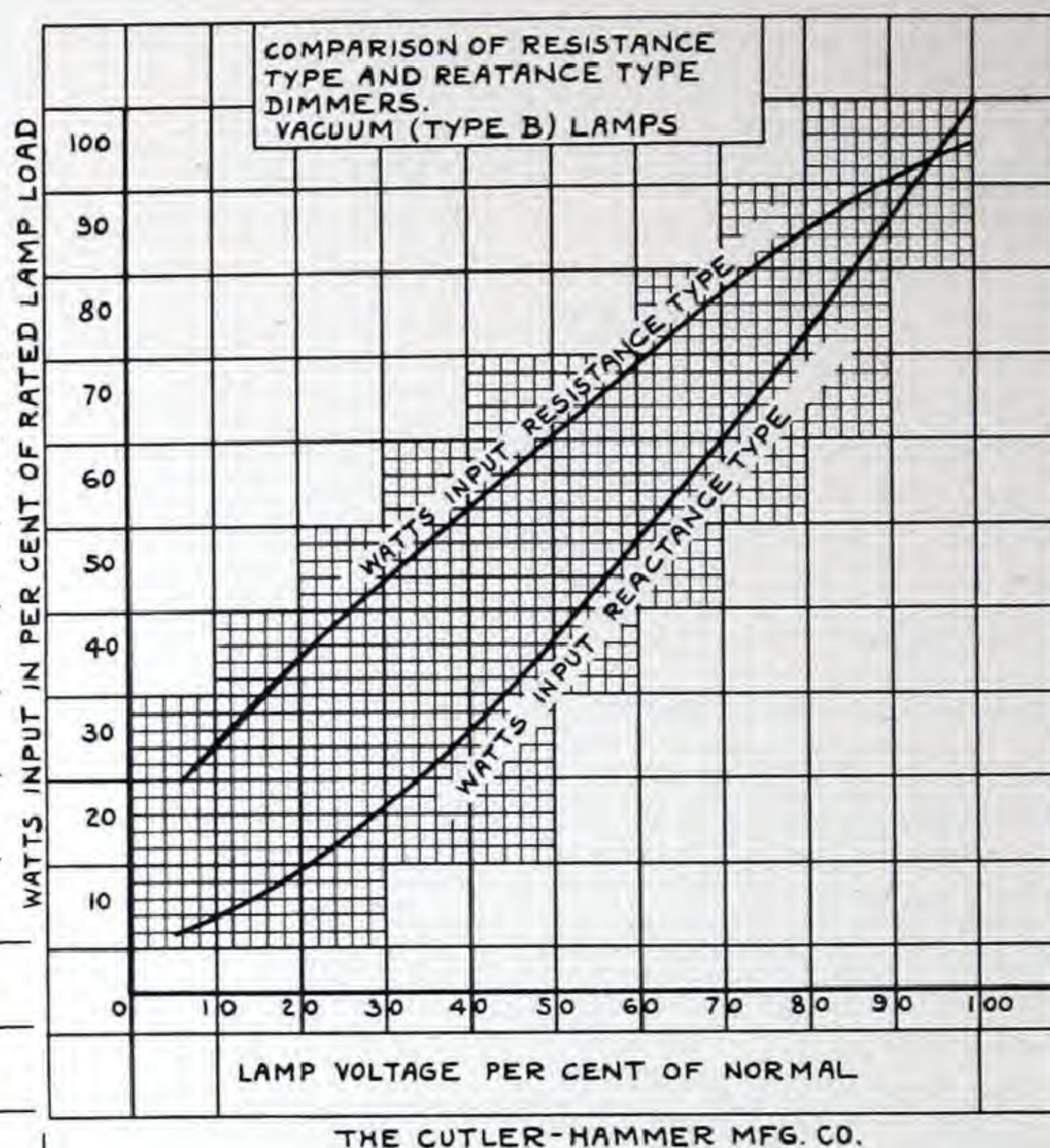
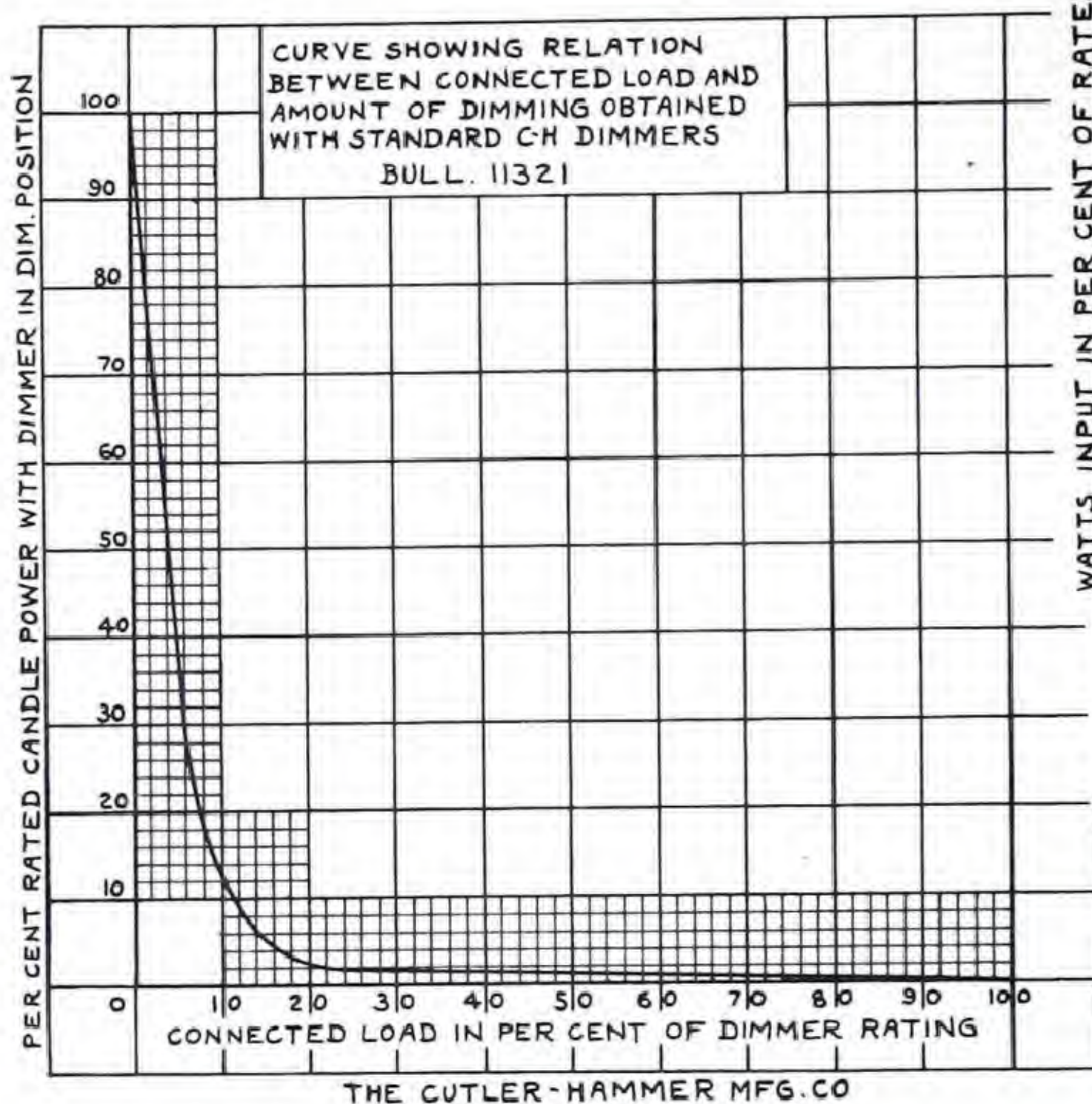
*This installation of C-H "Simplicity" Dimmers in the Hanna Theater, Cleveland, shows the slow motion hand wheel by which various groups of lights in different rows may be slowly dimmed together, brightened simultaneously, or dimmed while another group is brightened. Gradual dimming and very beautiful color effects are thus made possible. The switchboard at the left is a Major (F. A.)*





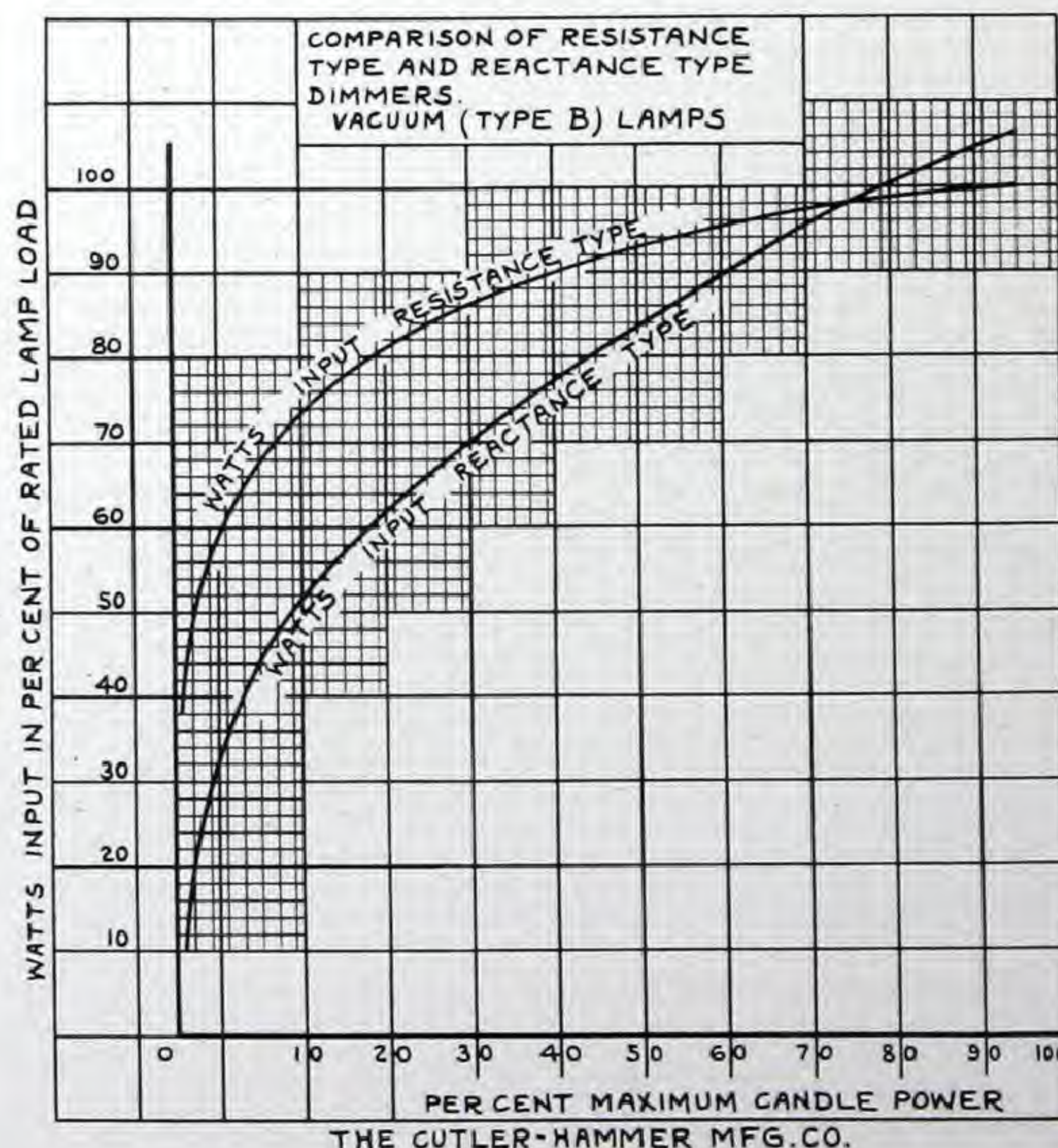
# Comparison of resistance and reactance type dimmers

The chart at the right shows the comparative efficiency of dimmers of the resistance and reactance types at different lamp voltages. A considerable saving in energy, it will be noted, is effected by use of the reactance type.



At the left is shown the relation between the connected load and amount of dimming obtained with Standard C-H "Simplicity" Dimmers.

The curves plotted at the right show the comparative candle power with the two types of dimmers at different percentages of the rated lamp load. This curve, too, shows the economy in energy of the reactance type.





## Motor driven theater dimmers for halls, hotels, salesrooms and like applications

**M**OTOR driven dimmers are particularly suited to illumination control applications for salesrooms, hotel dining rooms, halls, and in connection with various attention compelling devices where a continuous cycle of softly blending color effects is desirable. Their use in theaters to maintain softly changing illumination in the lobby and foyer is rapidly growing in popularity.

There are essentially two distinct types of motor driven dimmer equipments — pushbutton control type, and continuously operating type.

The pushbutton control type is for the application requiring control from one or more remote points, as in salesrooms, some special theater installations, etc. A motor can be provided for each dimmer or for various groups of dimmers according to requirements of the effects desired. Each motor will then operate as many dimmers as are interlocked with it.

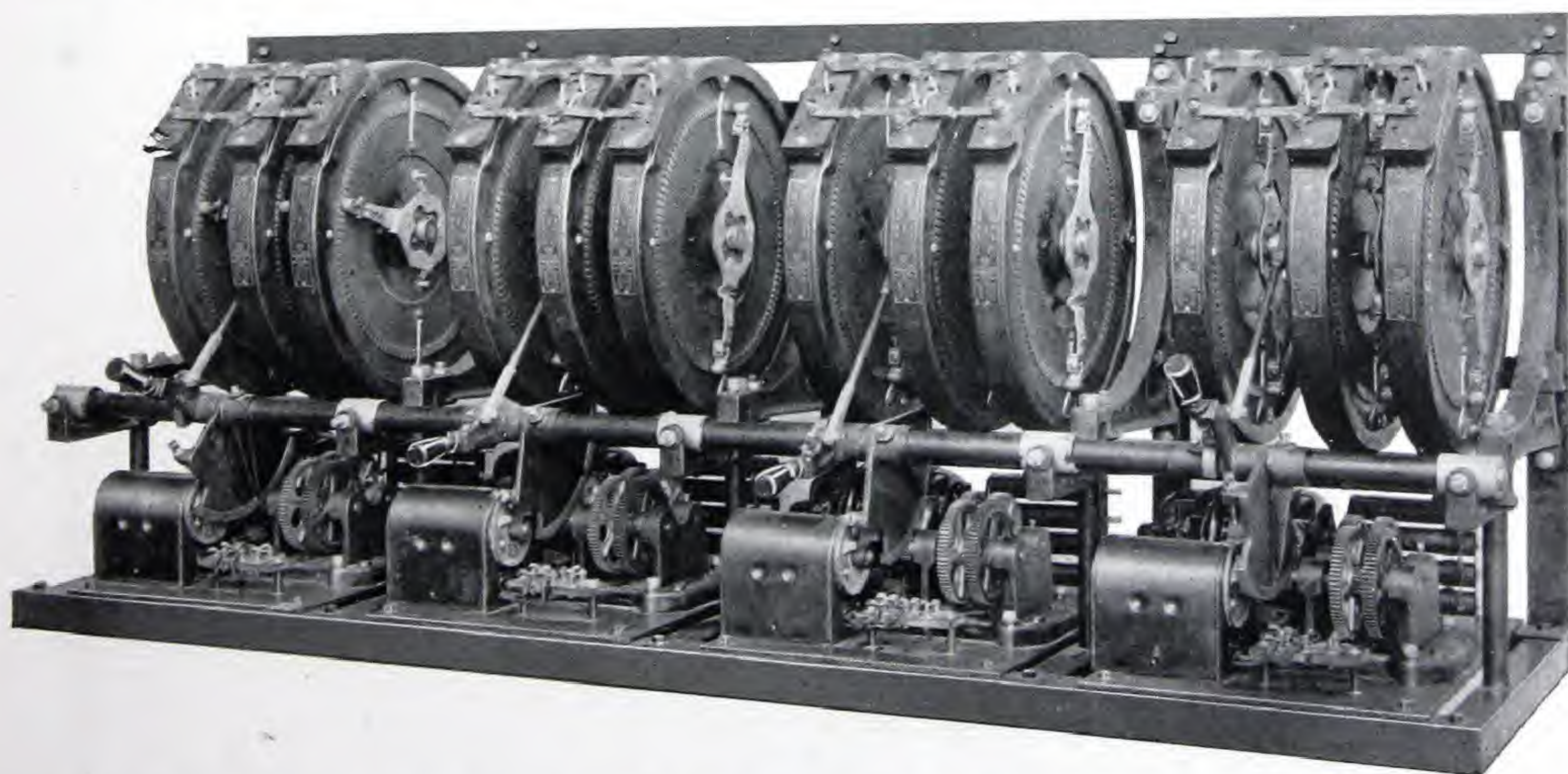
The dimmer plates with motor drive can be installed in any out-of-the-way location with one or more pushbutton control stations mounted at the points of operation. At a touch of a button, the

dimmers respond immediately, bringing the light to the pre-determined brilliancy to produce the desired color effect.

Individual and interlocking master control of the motors is provided as on manual dimmers. The several motors operating their respective dimmers can be operated simultaneously by the introduction of a master switch that will start or stop all motors simultaneously.

The continuously operating type is used in theater lobbies, hotel dining rooms, etc., where a continuously changing cycle is desired. Adjustable driving members make possible the pre-setting of any color arrangement desired and permit changes in the color cycle according to the requirements. The color sequence is created by simply starting the motor and the effect is repeated as long as the motor continues to operate.

Motor driven dimmers have the same characteristic features as are found in the standard C-H "Simplicity" plate-type dimmers. The mechanical driving mechanism is also of the usual C-H high-grade quality in material and workmanship.



*Motor driven dimmers are comparatively small units and particularly suitable for lodge halls, hotels, salesrooms, lobby displays, in the foyer of a theater and in connection with various attention compelling devices. Standard circular plate "Simplicity" Dimmers are employed and operated by small motors controlled from conveniently located push buttons.*





## Typical group of theaters using C-H Dimmers

*At the left is, shown the stage arch of the New Palace Theater at South Bend, Indiana.*

*Graefer's Egyptian Theater, Portland, Oregon. One of the many smaller theaters that find Cutler-Hammer Dimmers profitable.*

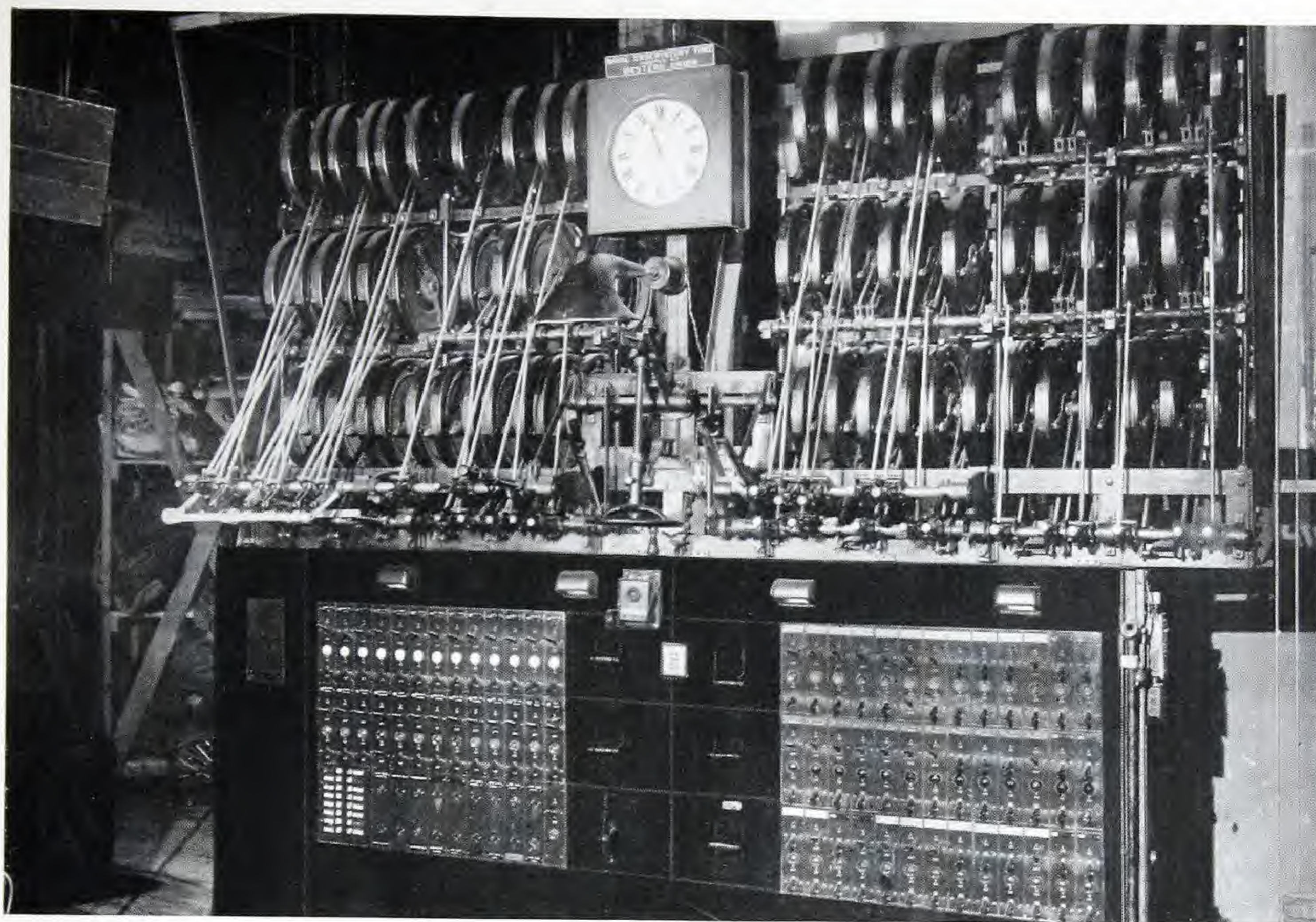


*The Grand Theater, Keokuk, Iowa. Here, too, the Cutler-Hammer Dimmer equipment is playing an important part in increasing the attendance record.*

*The National Theater, Richmond, (Mr. C. K. Howell Architect). The switchboard and dimmer installation is shown on page 10.*

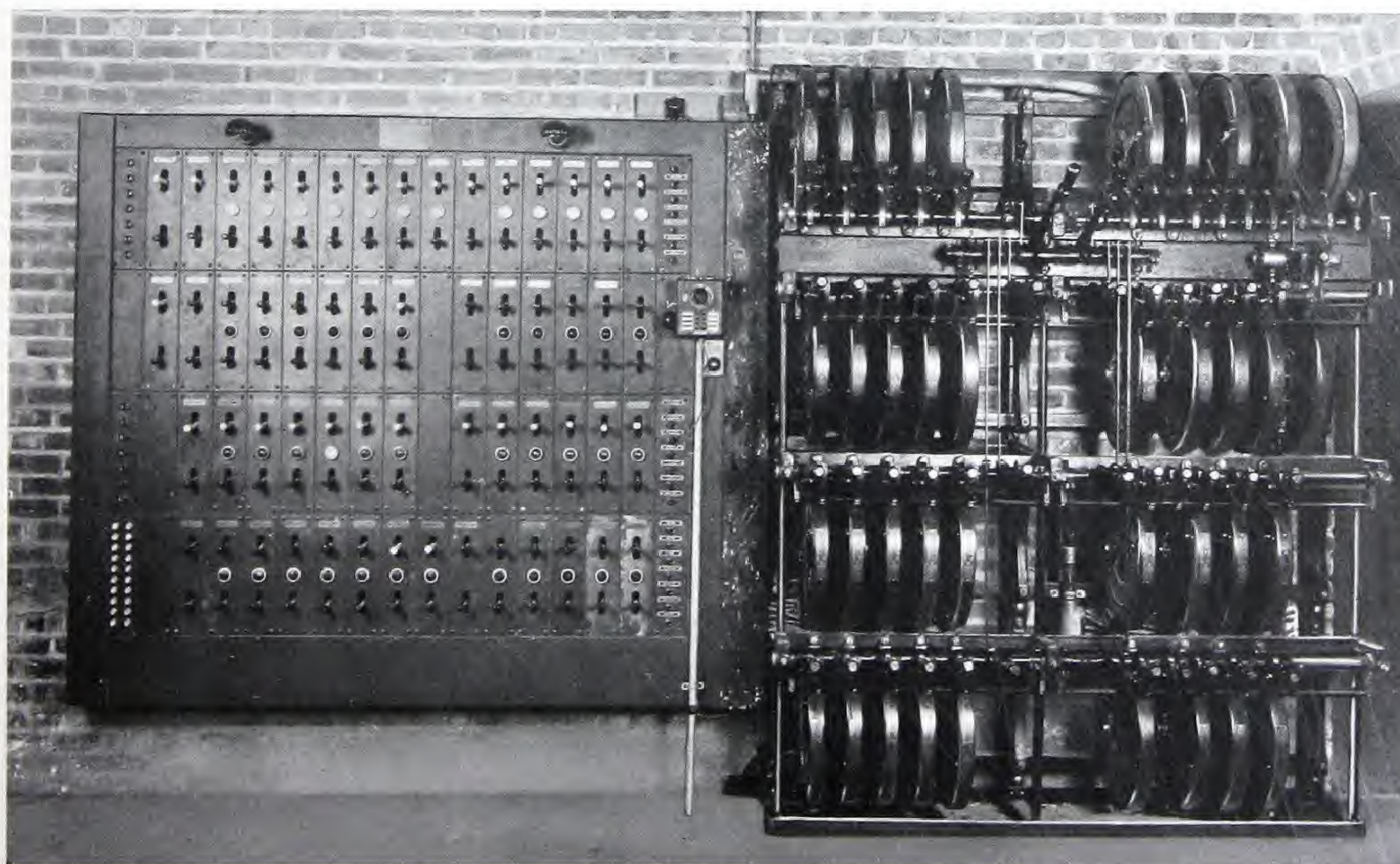




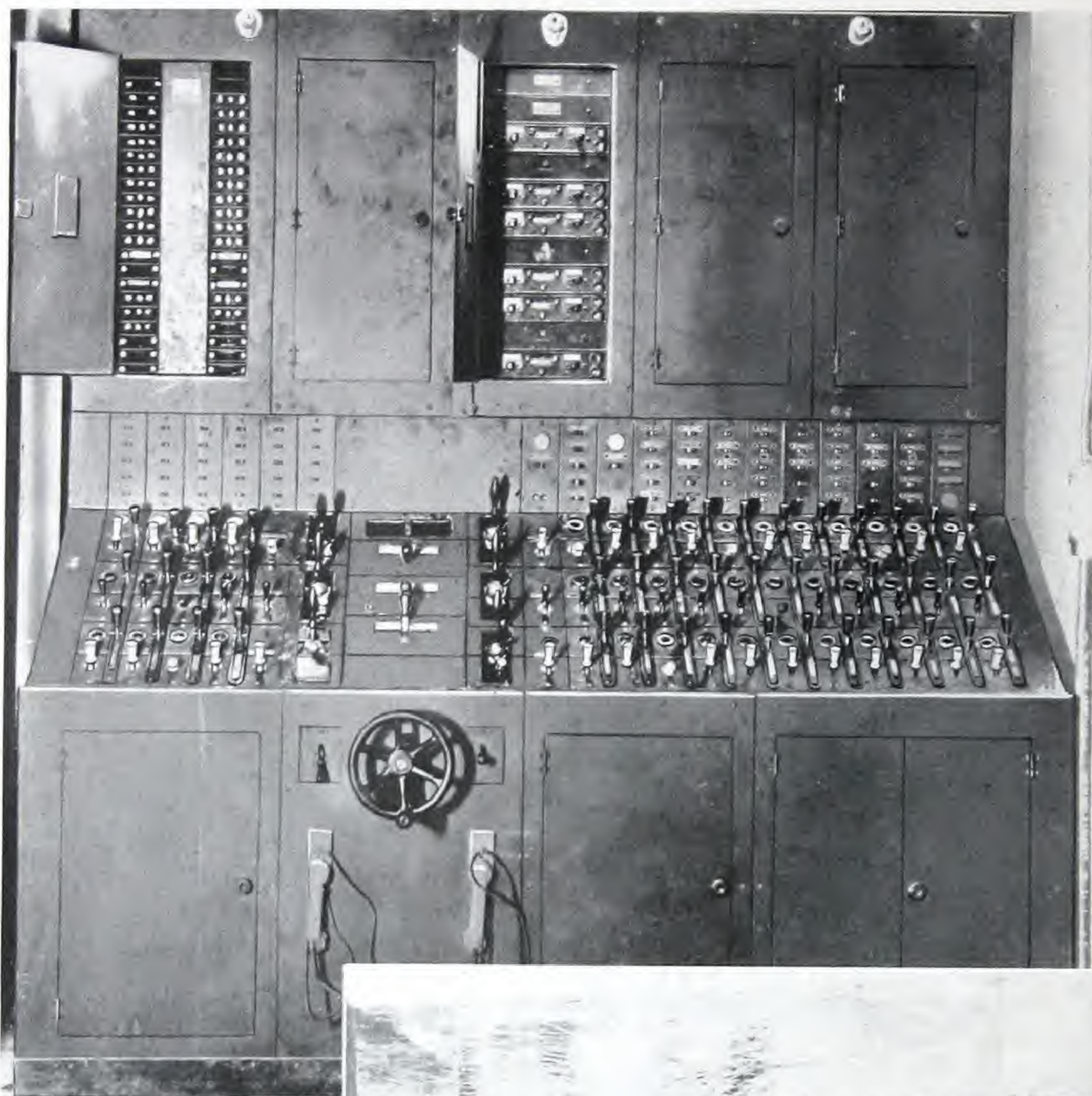


*The view above shows the installation of Cutler-Hammer Dimmers which control the lighting in the famous old Hippodrome, New York City.*

*Below is a floor type C-H Dimmer bank without slow motion drive showing the usual arrangement of levers in rows according to color. The switchboard is a Major (F. A.).*

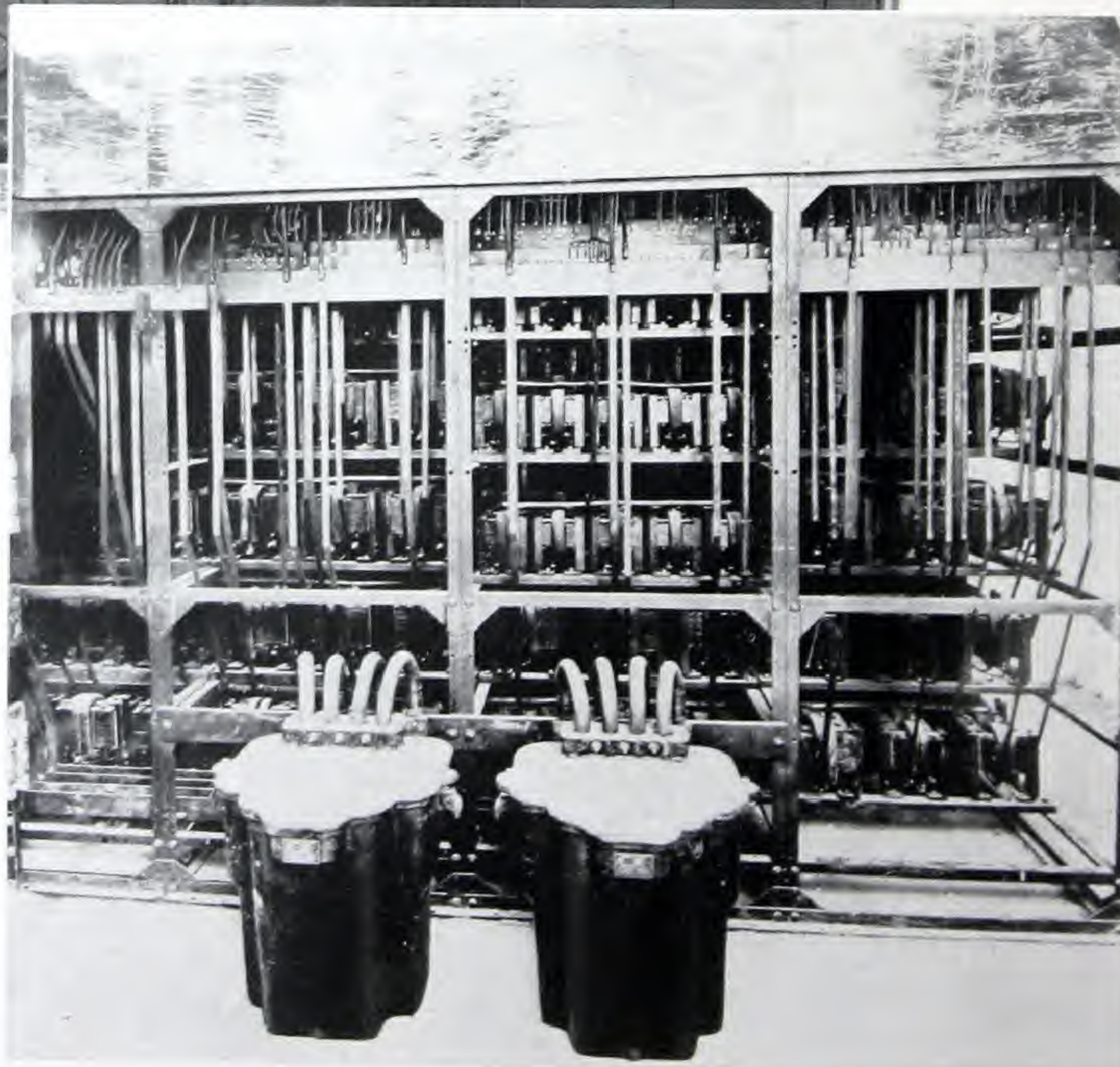






*Above is shown the control board for C-H Reactance type dimmers in the Scottish Rite Cathedral, St. Louis Mo.*

*A rear view of the dimmer bank showing the booster transformers used in this installation is at the left.*





## C-H Reactance Type Dimmers



HIS type of dimmer solves the illumination control problem for the large theater, where conveniently located space is at a premium. This is particularly true where the circuits are of large capacity, as in modern auditoriums, Masonic lodges, and large moving picture theaters.

Many modern installations require a number of dimmers with a capacity of 10 or 20 K. W. and sometimes greater capacities.

The Reactance type dimmer equipment is well fitted for installations of this character. Because of the compactness of its control board it affords convenience of control without sacrificing the very necessary smoothness of illumination control so necessary in modern dimmer practice.

This equipment consists essentially of two units; the Reactance dimmer or reactor, and the control plate.

In the reactor, the impedance of the light circuit is varied through the medium of flux created by a D. C. excited coil superimposed on the flux created by the A. C. load coil. This dims the lights or brightens them as desired. Only a small amount of direct current is required for excitation of the D. C. winding. This exciting current can easily be controlled from a distant point by means of a standard C-H "Simplicity" dimmer resistance plate. This resistance plate controls the current of the D. C. windings of the reactor. Since this current is only a very small per cent of the lamp load, only a few plates are required, thereby effecting a substantial saving in mounting space.

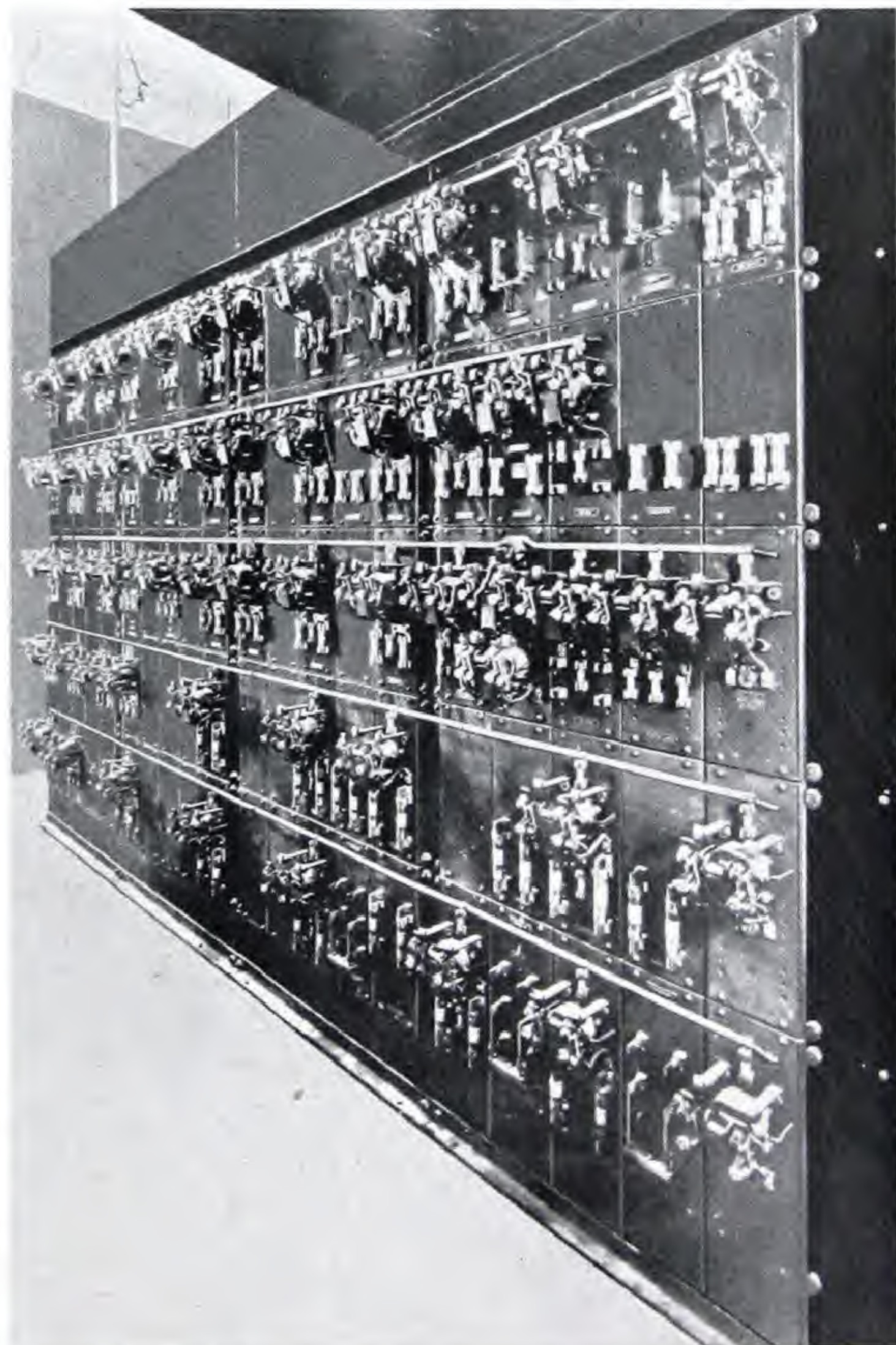
The reactor may be located in close proximity to the lighting load or in any other location where space is available. This removes the largest part of the dimmer installation from the stage and permits placing the dimmer in the basement or in any out-of-the-way location.

The only part of the Reactance dimmer equipment that is mounted at the point of control is the pilot board. This pilot board includes the D. C. controlling plates with individual levers, master

levers and slow-motion drive, and incorporates all of the flexibility provided by resistance type dimmers. It is a very small unit requiring only a small fraction of the space required by resistance type dimmers for controlling loads of equal capacity.

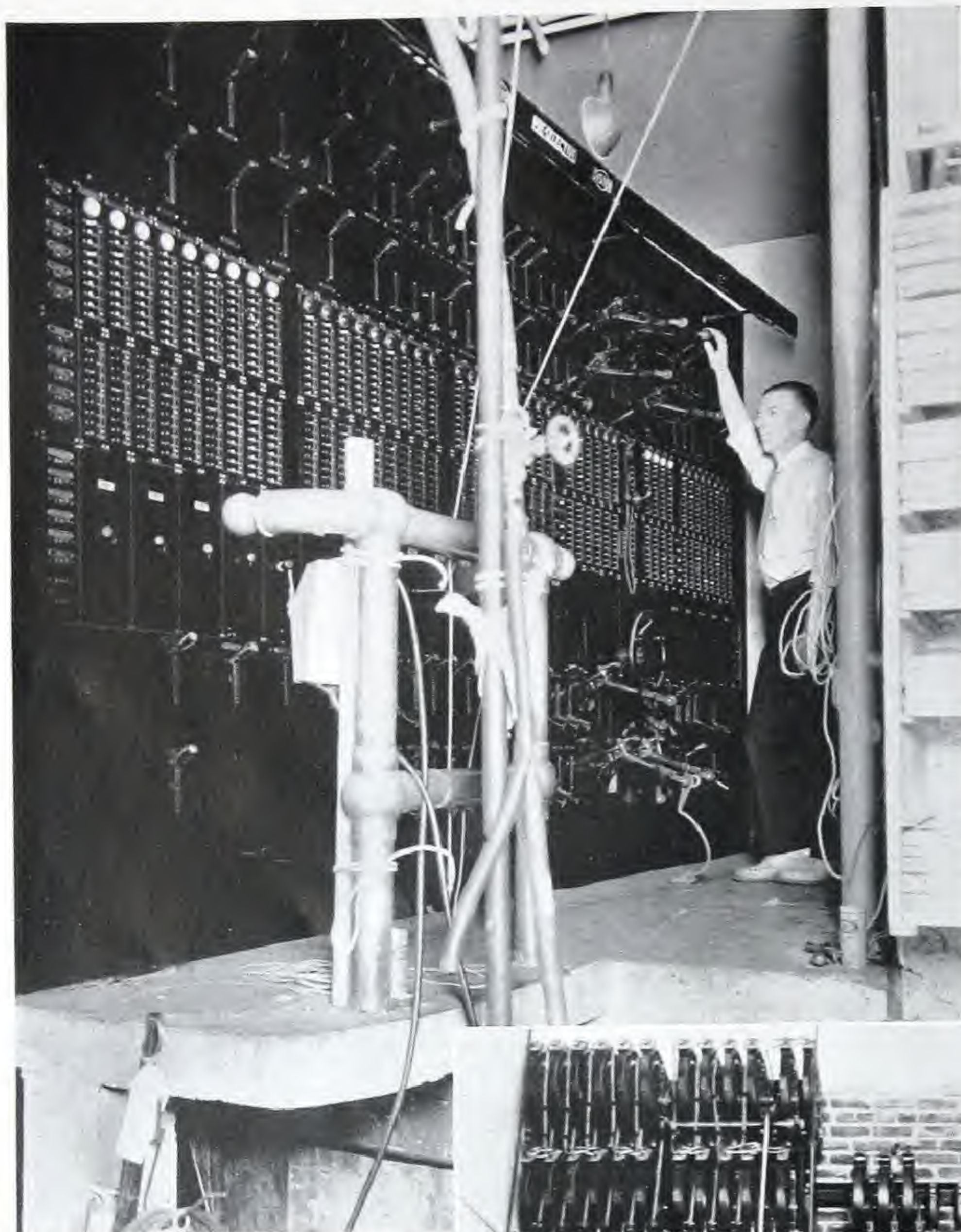
The equipment, therefore, not only meets the requirements of limited mounting space, but also provides the most convenient control by permitting the grouping of all control levers in the smallest possible space.

An excellent example of this type of installation is shown on the opposite page.

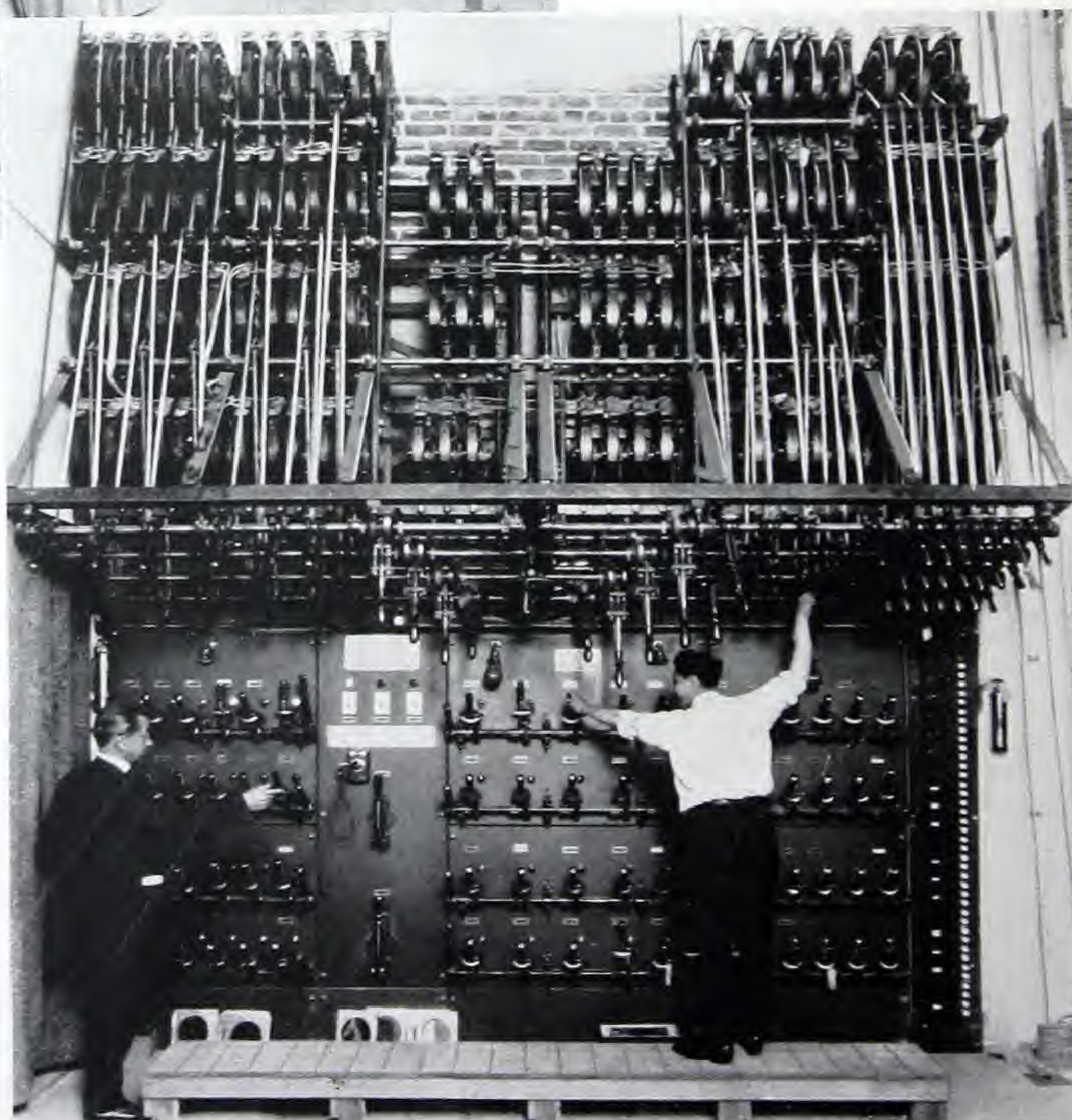


*The remote control board used at the Scottish Rite Cathedral, St. Louis, Mo., in conjunction with the reactance type dimmer pictured on the opposite page. The C-H Magnetic Switches used are designed especially for this type of work.*





*Showing the dimmer control Major (F. A.) board in the Senate Theater, Chicago. The C-H "Simplicity" Dimmer levers and slow motion hand wheel are shown in front of the operator. The dimmers are installed behind the panel.*



*The applicability of C-H "Simplicity" Dimmers to unusual forms of installation is shown in this view taken at the Forum Theater, Los Angeles, Calif. Small lateral space is required by the installation and all the operating levers are within easy reach. (Mutual Board.)*



# THE CUTLER-HAMMER MFG. CO.

GENERAL OFFICES AND  
WORKS  
MILWAUKEE  
P.O. BOX NO. 1564

ELECTRIC CONTROLLING DEVICES

NEW YORK WORKS  
801 EAST 144TH STREET  
NEW YORK

MILWAUKEE, WIS.

November 26, 1926

Mr. James D. Lee, Jr., Lighting Representative,  
Public Service Electric & Gas Company,  
418 Federal Street, Room #5,  
Camden, New Jersey

Dear Mr. Lee:

The book which you requested, "Illumination Control for the Modern Theatre", is sent herewith. You will find it interesting from front to back cover. Every effort has been made to make it a real help to you.

You will find illustrations showing many theatres, both small and large, in which C-H "Simplicity" Dimmers are used, - also pictures of installations indicating the various ways of grouping, mounting and locating the dimmers to fit most any size and shape of available space. These installation views may help you to arrive at a means for locating dimmers in your theatre. In fact, there is so much of interest in this book that you will probably want to start on page 1 and read through.

Should you want additional information, we suggest that you get in touch with our nearest office. We have notified them of your interest, so they will be glad to serve you. They are located at 8 West 40th Street, New York, New York.

Yours very truly,  
THE CUTLER-HAMMER MFG. CO.

*T.D. Montgomery*  
T.D. Montgomery,  
Manager of Industrial Sales.



# The Carter-Vesco Case

UNITED STATES DEPARTMENT OF JUSTICE  
WASHINGTON, D.C. 20535  
JULY 10, 1974

MEMORANDUM FOR THE ATTORNEY GENERAL

SUBJECT: JAMES C. VESCO, JR.

Re: Letter from Mr. J. Edgar Hoover, dated July 9, 1974.

Mr. James C. Vesco, Jr., is a resident of the District of Columbia and is the owner of the Washington Post Company. He is also the owner of the Washington Post and Times Herald.

Very truly yours,

For the Director, FBI

Information from the

made to make it

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J. D. Henderson,  
Manager of Industrial Sales.

6-122



## The advantages of remote control and pre-selection through C-H Magnetic Switches

**M**ANY quick changes of scenes and lighting effects are sometimes required during a performance. This has led to the development of the pre-selection type of dimmer switchboard in which C-H Dimmers and Magnet Switches play a most important part.

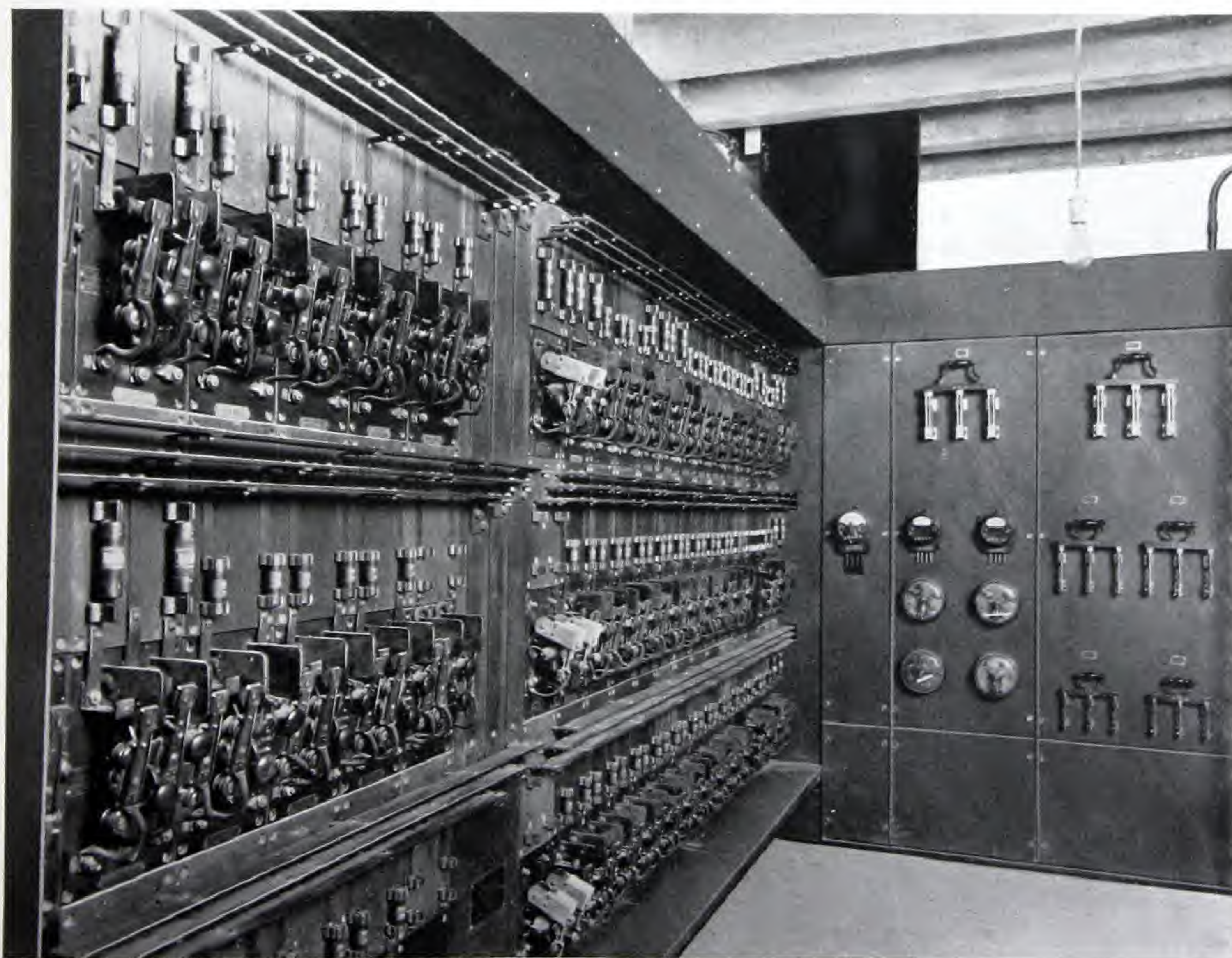
These switchboards enable one or more lighting effects to be definitely selected and "set-up" on the board in advance. These lighting effects are then available at any time at the touch of a button or lever.

The installation at the Uptown Theater, Chicago, is a splendid example of a pre-selection type dimmer switchboard. With this switchboard (built by Major - Frank Adam Co., who use C-H Dimmers and Magnet Switches) ten complete lighting scenes can be set up at one time and controlled entirely by one

man. The scenes may progress forward or backward or in any rotation. The operator is furnished a cue sheet which he follows to give the proper lighting effects, just as the orchestra leader follows his cue sheet to give the right music.

The Magnetic Switches are usually mounted on a switchboard located in the apparatus room in the basement as shown in the illustration below.

Where space limitations require that the dimming equipment be placed at some distance from the most convenient point of control, the installation may be most efficiently handled by the Reactance type dimmers already described. The reactors can then be located at some distant point, and operated from the point of control. In such an installation the remote control switch plays a vital part.



*Showing the Major (F.A.) remote control board used in conjunction with C-H Dimmers. The C-H Magnetic Switches used are of special design, facilitating the remote control and pre-selection of various lighting scenes.*



## C-H "Simplicity" Dimmers in schools, lodge halls and office buildings



ILLUMINATION control as used in the successful theaters, is finding its way more and more into schools, lodge halls, office buildings, convention halls and auditoriums of every description.

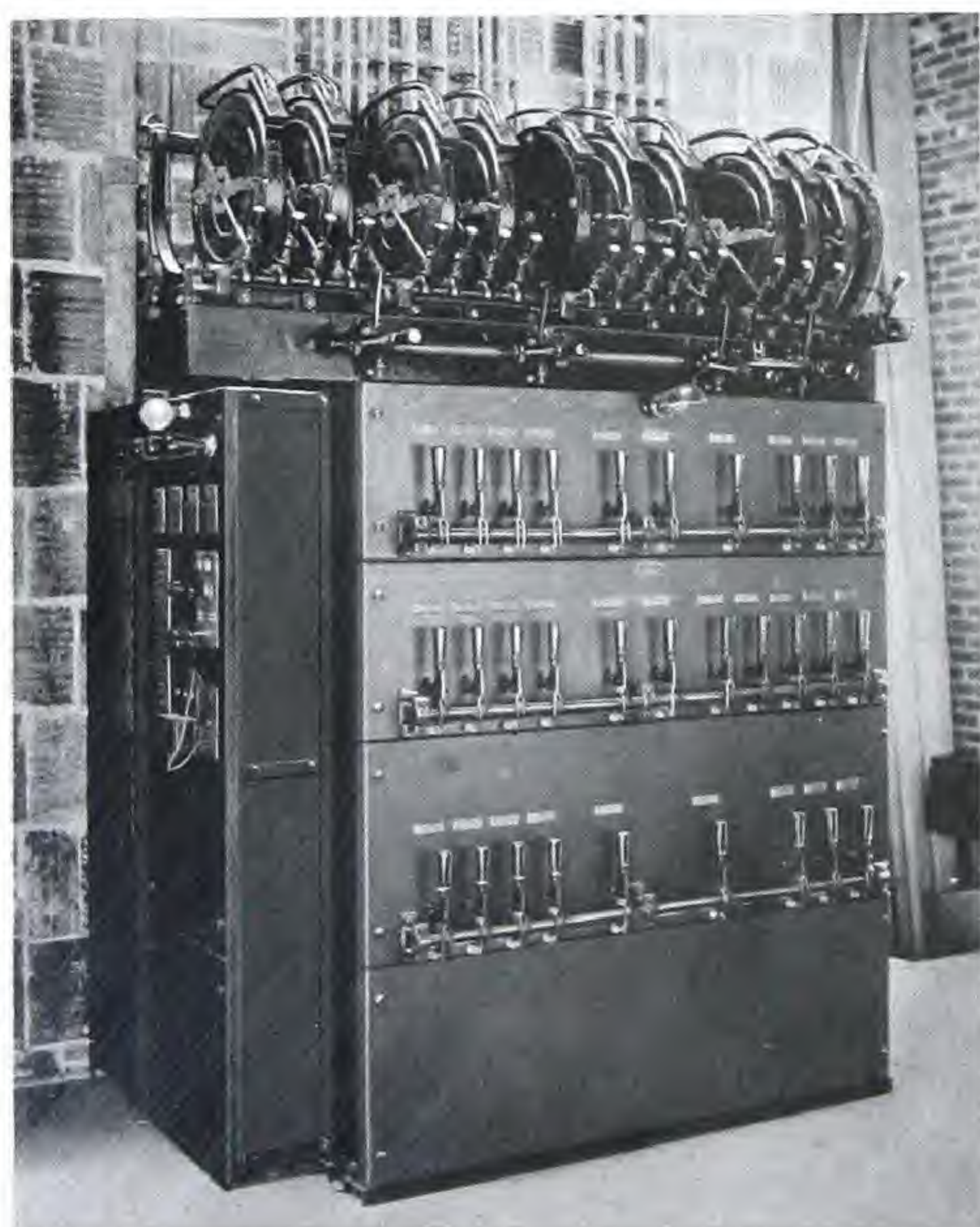
Controlling illumination so that lights are turned on or off gradually rather than a sudden snapping "off" and "on" is a sensible refinement. It is alone sufficient justification of dimmer applications in such places, to say nothing of the beautiful color combinations in lighting which are thus made possible.

In schools the C-H Dimmer banks permit the same illumination control for amateur theatricals and entertainments that is obtained in the professional houses.

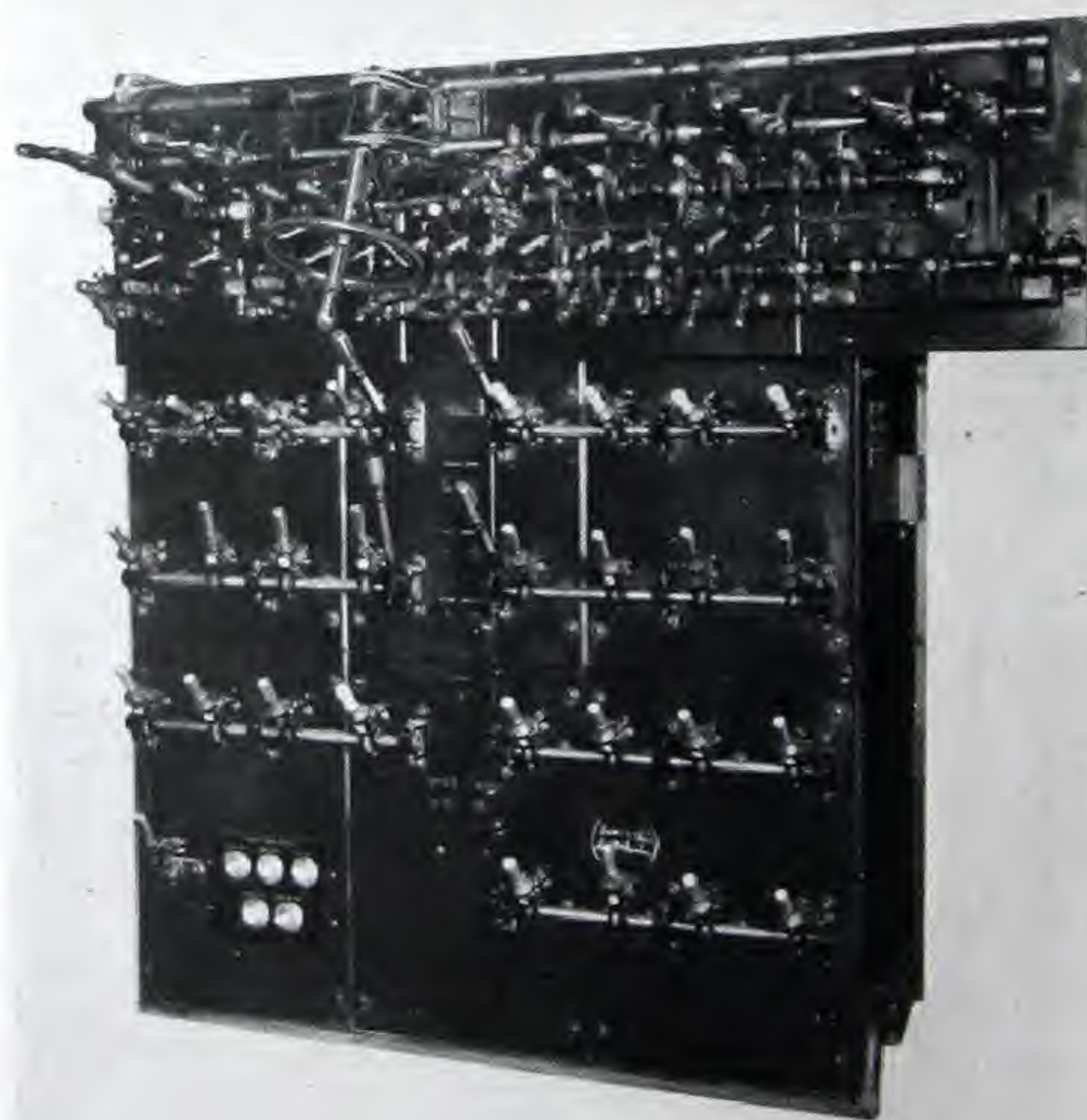
It goes far toward putting student entertainers in an enthusiastic and assured state of mind by creating a genuine and harmonious atmosphere. In musical institutions the close psychological relation between color and tone harmonies, now being more and more recognized, can be utilized to advantage both in training and entertainment.

In lodge halls especially, the softly blending color harmonies of light, made possible by C-H "Simplicity" Dimmers, serve splendidly to bear out the spirit of the meeting and emotion of the ritual.

Dimming practice for the auditoriums and meeting halls of larger office buildings is also gaining rapidly in favor. Wherever it is used it lends soft pleasing dignity and richness to illumination.

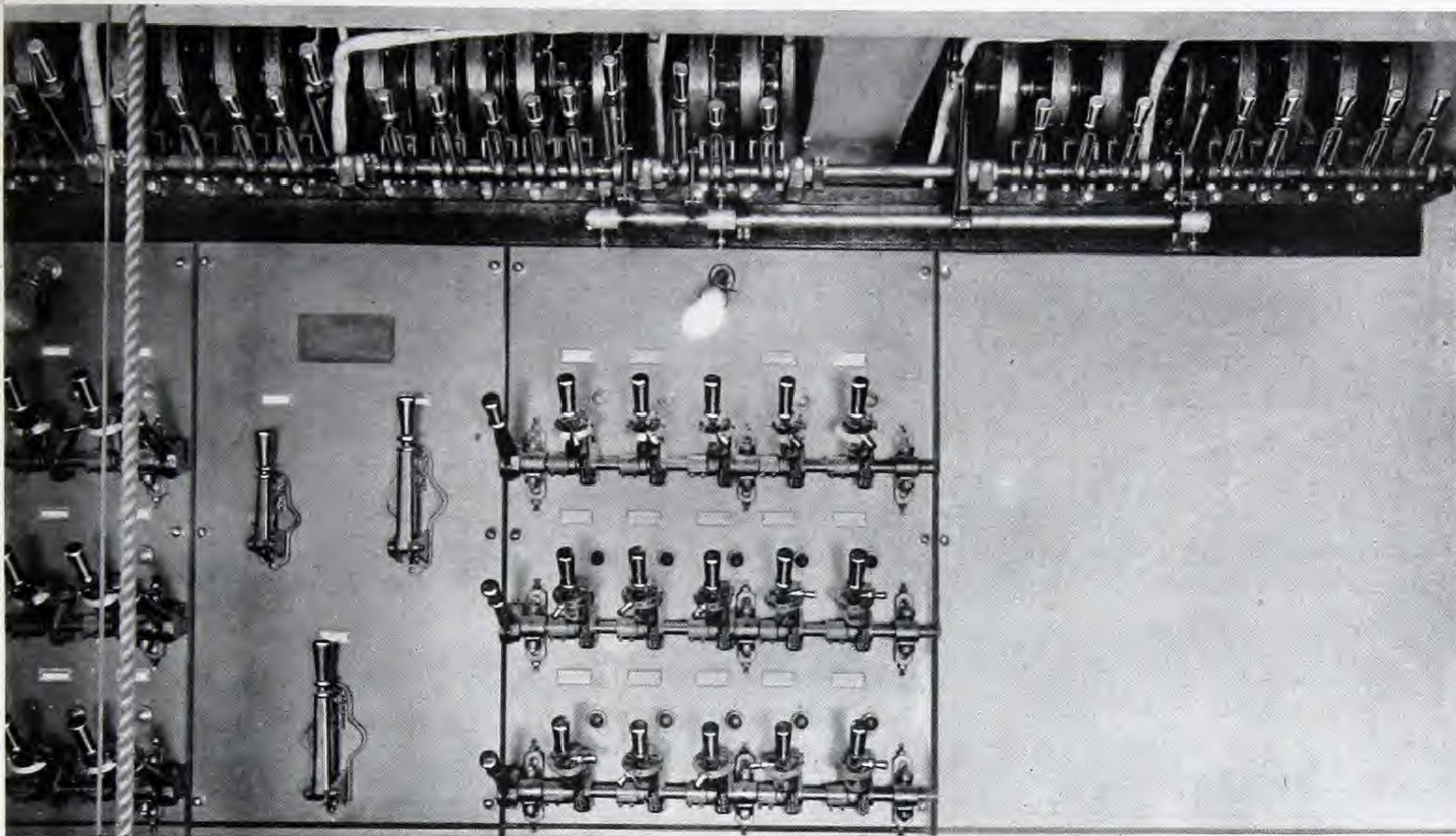


*A neat, attractive installation of C-H "Simplicity" Dimmers in the Practical Arts High School, Manchester, New Hampshire. Here the dimmers have been mounted above the switchboard which was built for the installation by the Worcester Electric & Manufacturing Co. of Worcester, Mass.*



*This installation of C-H "Simplicity" Dimmers at Kilbourne Hall of the Eastman School of Music, Rochester, N. Y., incorporates a slow motion hand wheel control as will be seen. The installation was made by the Wheeler Greene Electrical Supply Co.*

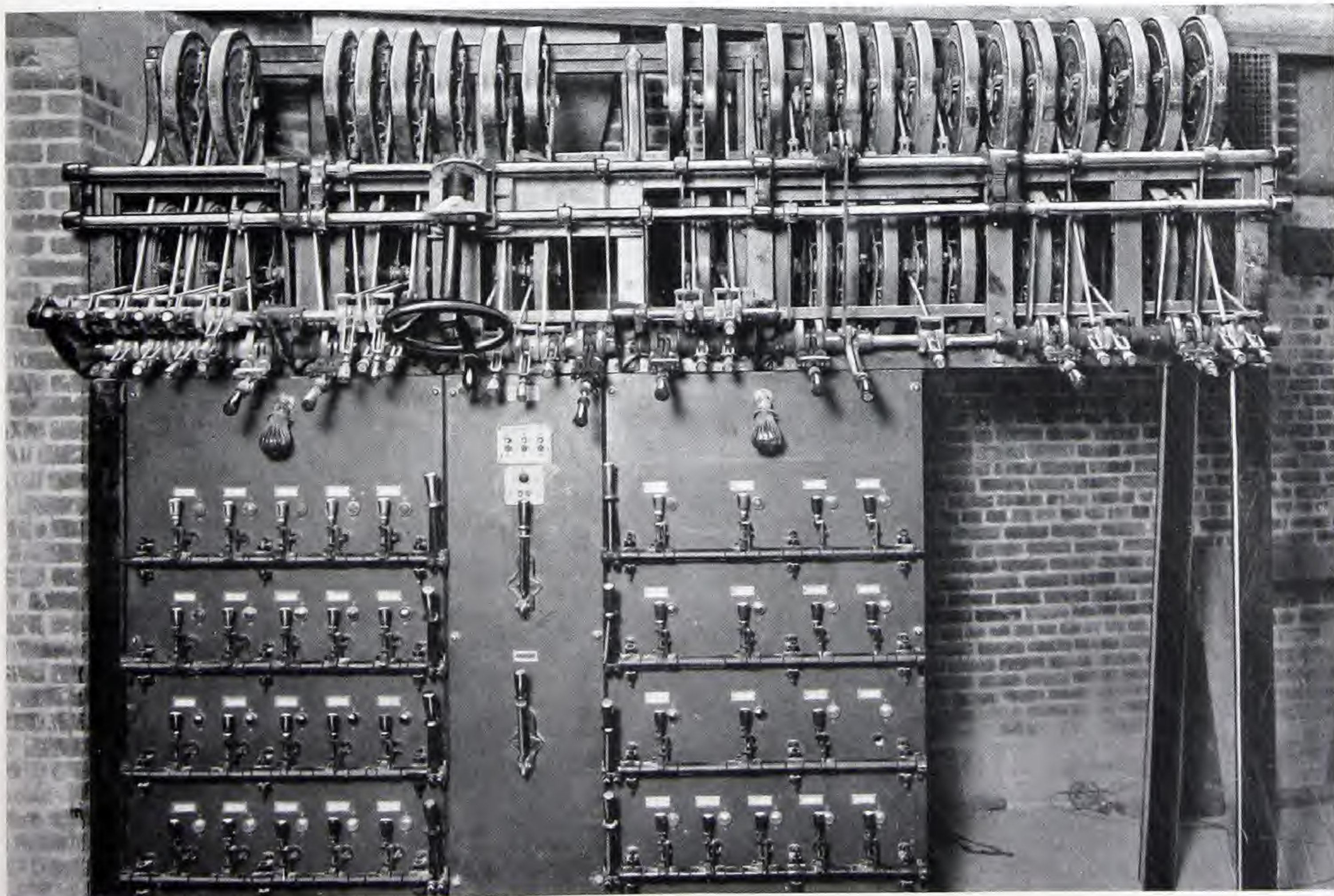




*Theater dimmer installation for lighting control in lodge halls throughout the country are coming more and more into popularity. Above is an attractive installation of C-H "Simplicity" Dimmers in the Scottish Rite Lodge of the Masonic Temple, Pittsburgh, Pa.*

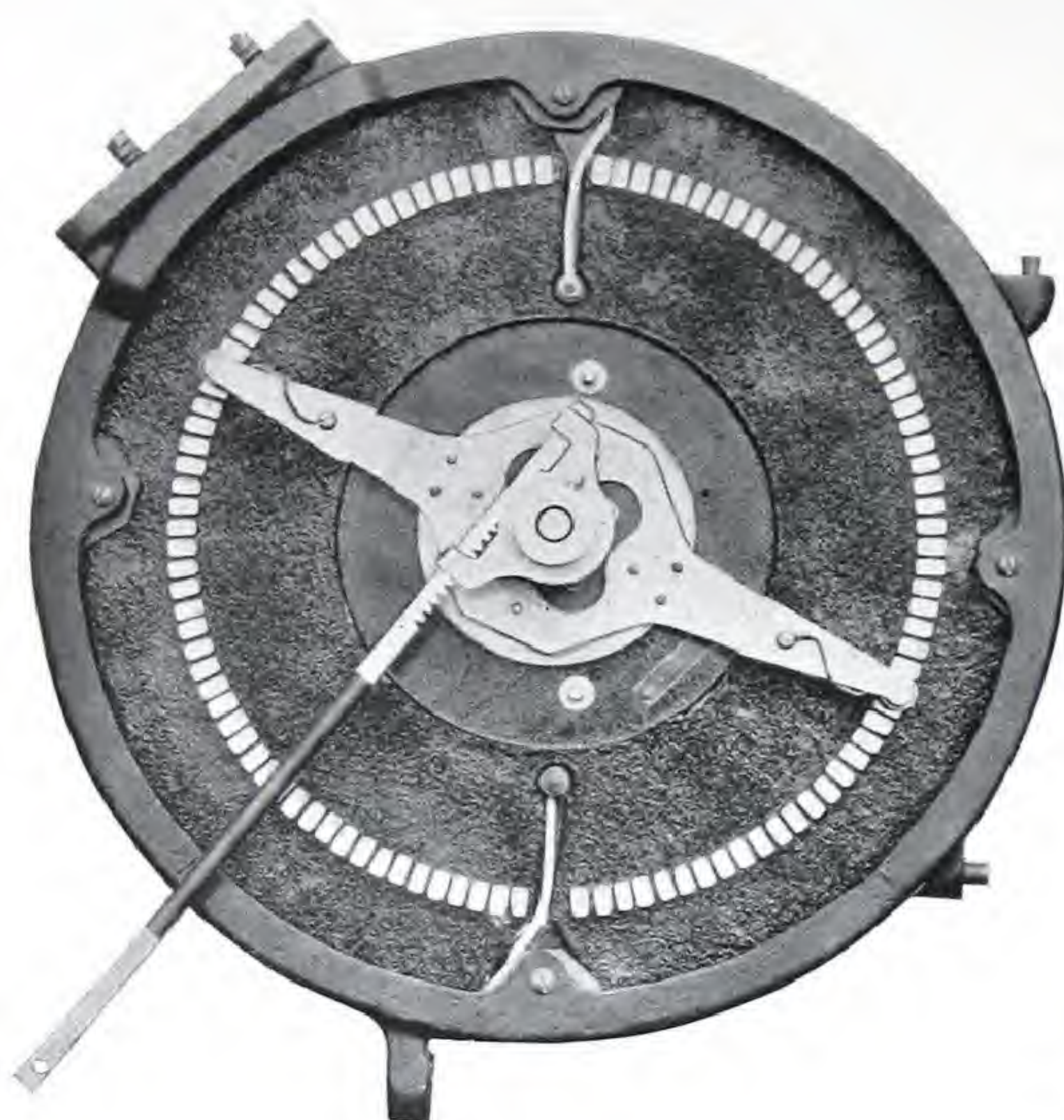
*Another installation of Cutler-Hammer dimmers, including the master slow motion wheel, is shown below. This controls the illumination in the Masonic Temple at Birmingham, Alabama.*

*Both of these boards were built by Mutual.*





# Design and construction features



*The complete C-H "Simplicity" Dimmer Plate is compact, ruggedly constructed and of the greatest accuracy in every detail. The soapstone base is itself an insulator, with high heat absorbing qualities. Smooth, flickerless dimming is assured by the 110 steps provided.*

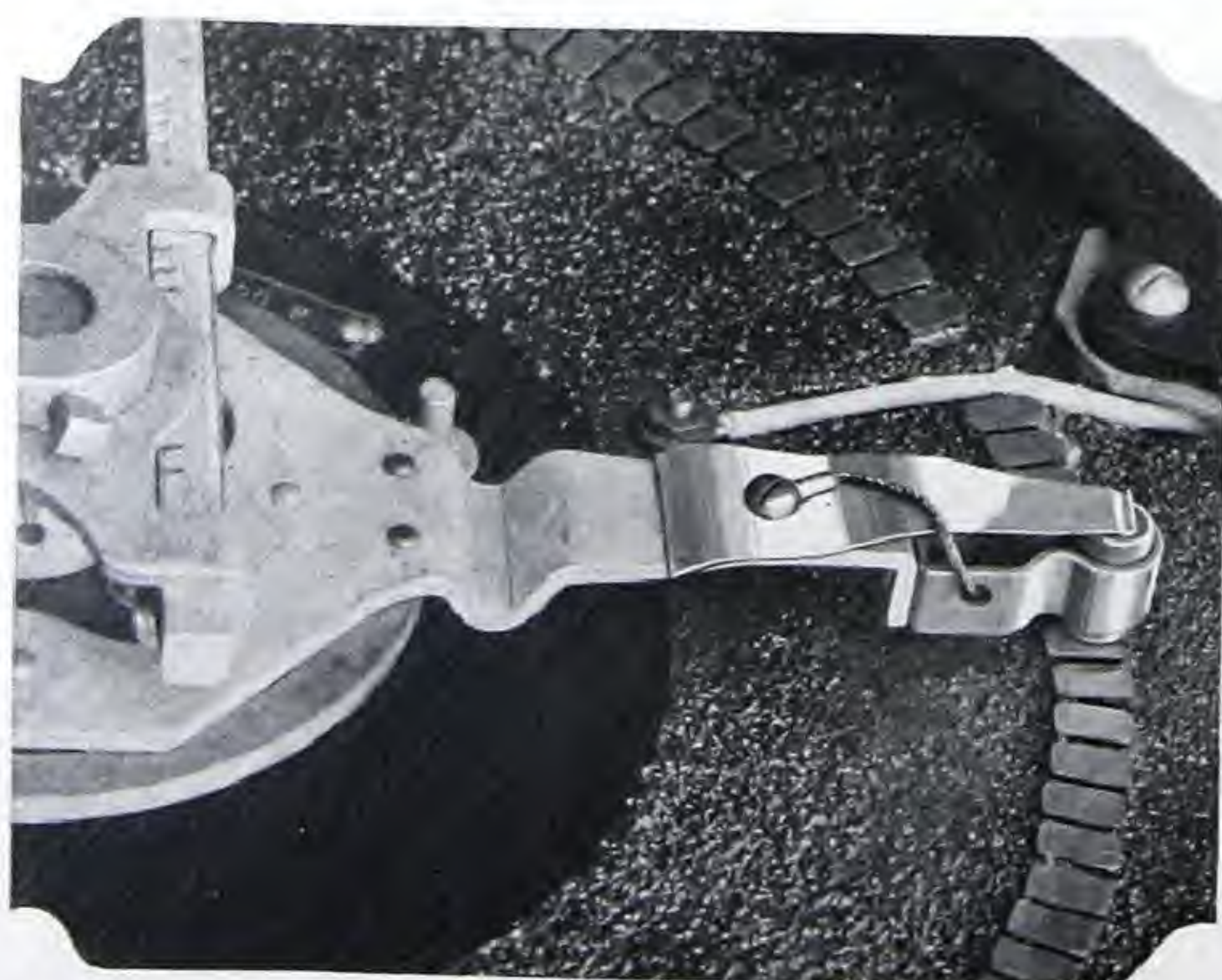


HE C-H "Simplicity" Dimmers are made for use on alternating or direct current. They consist of adjustable resistance or reactance devices, of the sliding contact type, attached to a soapstone base and mounted in a sturdy iron frame.

The capacities of standard C-H "Simplicity" units vary in lamp wattage from 300 to 3600 watts. Banks of any capacity are built. C-H "Simplicity" Dimmer plates are also supplied when necessary with a winding on both sides, making the capacity of each plate much higher.

C-H "Simplicity" Dimmers are made of non-combustible heat absorbing material. The temperature of issuing air is well within the limits of modern dimmer practice.

The dimmer plates are mounted with a four point suspension in a plate ring, which is bolted in place with a three point suspension in a strong iron frame. The same frame supports the operating lever shafts, which are provided with self-aligning or babbitted bearings. The frames are constructed in units so that they may be banked to obtain the most convenient control of operating levers and meet the mounting conditions most effectively.



*The stationary contacts are of polished brass which does not oxidize as does copper, thus reducing heat at the brush. These are imbedded in the heat absorbing soapstone base. The self-lubricating Cophite shoe (a copper and graphite combination) slides with little friction over these contacts. Heat can only be conducted to the spring through the cophite shoe, which is comparatively long; also a poor conductor of heat. Pigtails are connected to brush and contact lever without solder. Thus the operation of the dimmer is unaffected by temperature changes at the brush.*

*The contacts are spaced with the utmost accuracy so that no overlapping is possible. Smooth, flickerless dimming is the invariable result.*

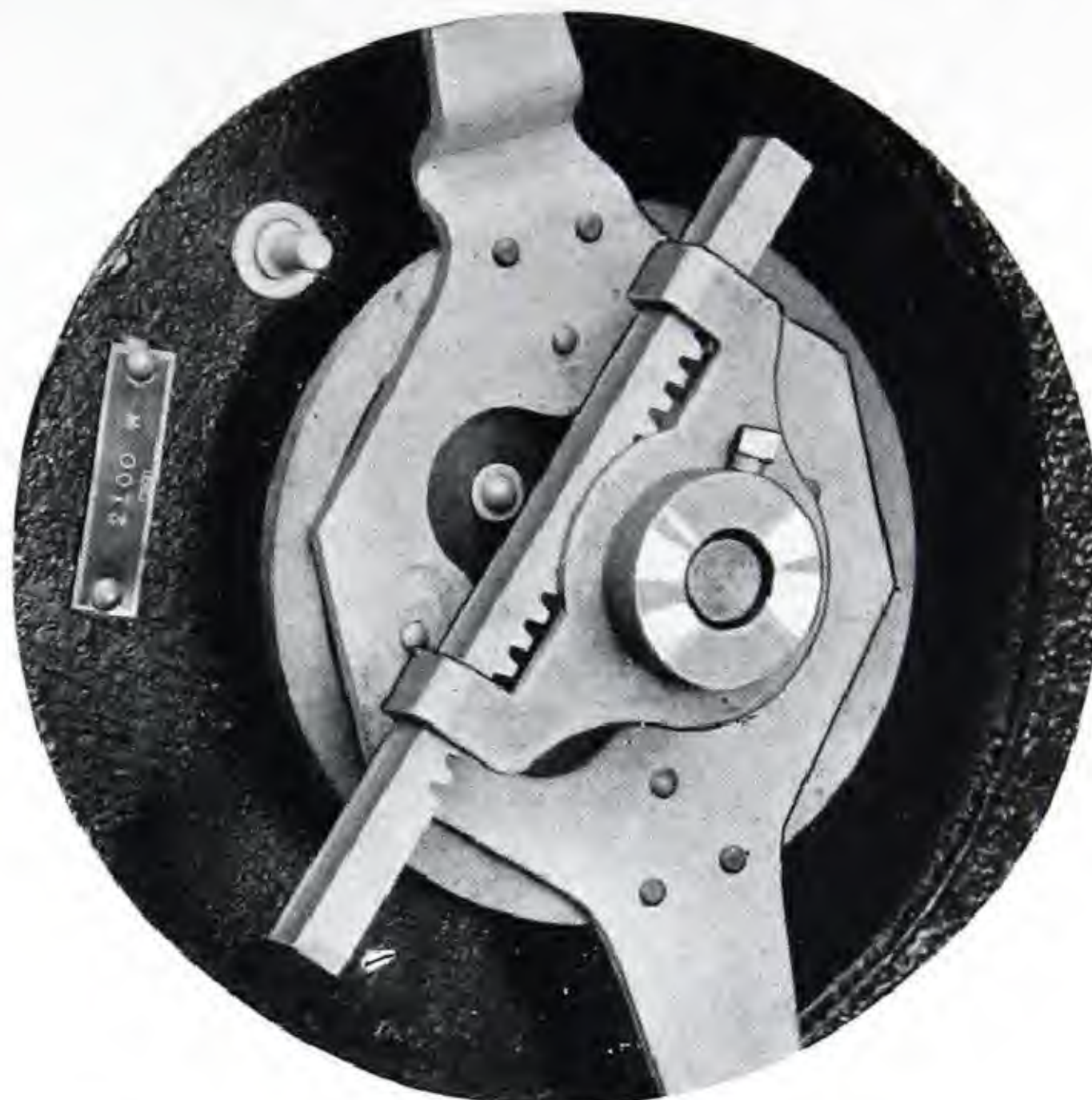




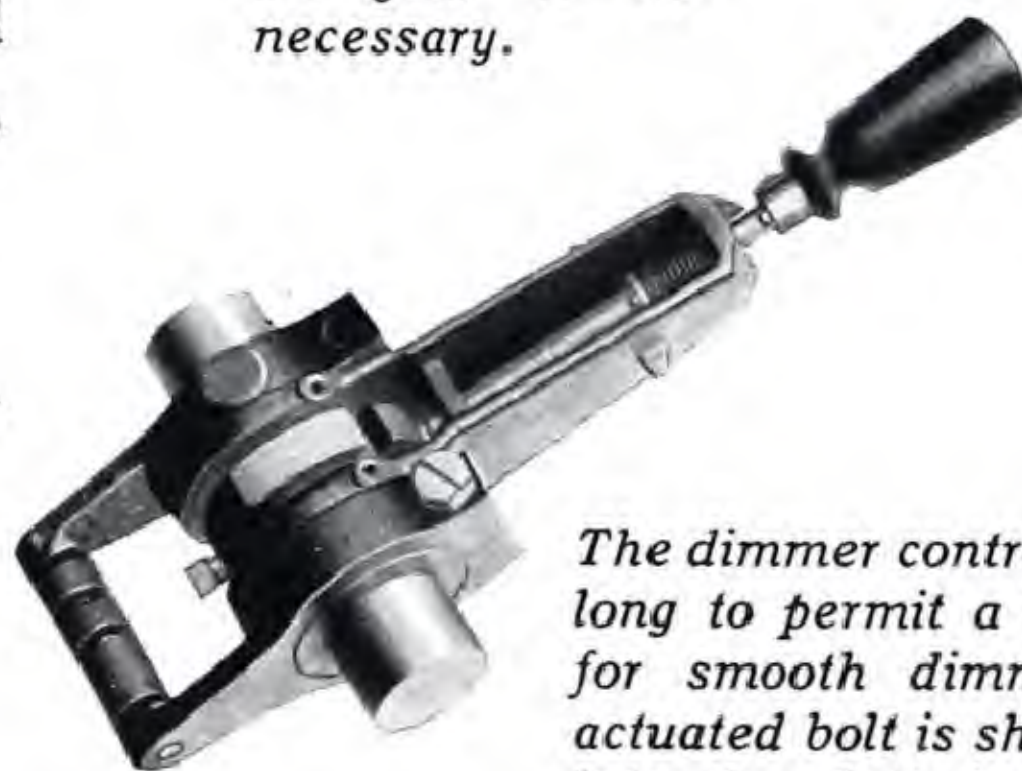
# of C-H "Simplicity" Dimmer Plates

The fundamental advantages which make C-H "Simplicity" Theater Dimmers superior and which have brought them into universal use may be briefly summarized as follows:

1. Absolutely flickerless control — eliminating spotty lighting, because there is no overlapping of contacts.
2. No "play" or back lash is present because of the simple direct rack and pinion drive used.
3. Dim modern lamps "black out"—110 steps from full brilliancy to "black out."
4. Designed for continuous duty and severe service.
5. Do not overheat or burn out, because the soap-stone bases have high heat absorbing and insulating qualities.
6. Use Cophite self-lubricating, long-life contact brushes.
7. Terminals are mounted on solid block of insulation, increasing electrical clearance to ground many times.
8. All current carrying parts perfectly insulated from operating levers, rack rods, pinions, frame, etc.
9. Compact and rugged — easily banked.
10. May be grouped to provide every known combination of dimming and color control.



*The rack and pinion drive, employed in the operation of C-H "Simplicity" Dimmers, is direct and positive, eliminating the play and back lash present in other forms of drive. The force required for operation is so slight that lubrication of the gear is not necessary.*



*The dimmer control lever is sufficiently long to permit a slow, steady motion for smooth dimming. The spring-actuated bolt is shown. When it slides into the slotted cam on the shaft it throws the dimmer plate into interlock.*



*The terminals of C-H "Simplicity" Dimmer Plates are mounted on a solid block of insulation which increases the electrical clearance to ground many times over ordinary construction. The terminals furthermore are easily accessible.*

## Circuit indicating labels

When desired, brass label tags indicating the circuit controlled by each lever are furnished. These tags consist of discs of enamelled brass to be attached to the ends of operating levers. The color of the disc and the letters and numbers stamped on it indicate, at a glance, the circuit controlled by the lever. If indicating labels are desired the designation of the current controlled by each lever should be given when ordering dimmers.

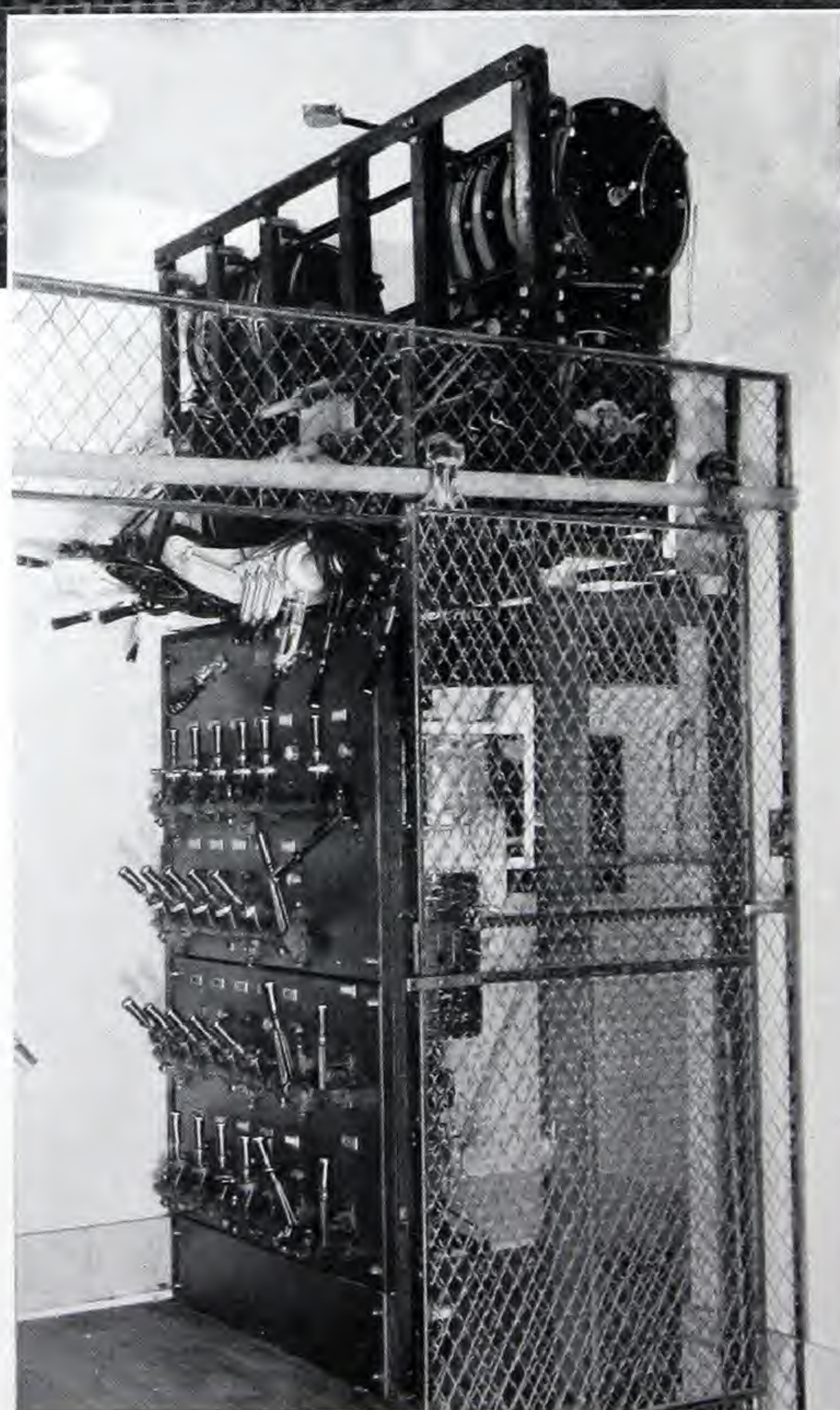




*The largest office building in the world, the General Motors Building of Detroit.*

*This building is typical of many of the finer office buildings of the country which have adopted theater dimmers for control of the lighting effects in their auditoriums, convention halls, etc.*

*The installation of C-H "Simplicity" Theater Dimmers which control the lighting in the auditorium of the General Motors building is shown at the right.*





## Installation of C-H "Simplicity" Dimmers

**E**ACH Cutler-Hammer "Simplicity" dimmer plate is a complete self-contained piece of apparatus. It can be removed or replaced easily and can be operated alone or in connection with others by means of individual or master levers, respectively. Few plates, or many, may be installed at a time, according to requirements. Substantially banked in a rigid iron frame they may be placed in one or more rows to permit the grouping of individual dimmer operating levers into color sections horizontally and vertically according to circuits. For instance — the dimmers controlling all of the border lights will be placed in one vertical group, all of those controlling the foot lights in another vertical group, etc., while all the red lights will be placed in a horizontal row, the white lights in another horizontal row and so on to facilitate interlocking control throughout.

"Simplicity" plates are compactly built to conserve space. Four of them, sufficient for a house using not more than a total lamp load of 14,400 watts being easily installed in a space about 20 inches each way, less than would be covered by a single page of a daily paper.

The fact that C-H "Simplicity" plates can be furnished up to certain capacities with resistance windings on both sides, due to the high heat absorbing qualities of the soapstone base, is a further space conserving feature found only in C-H Dimmers.

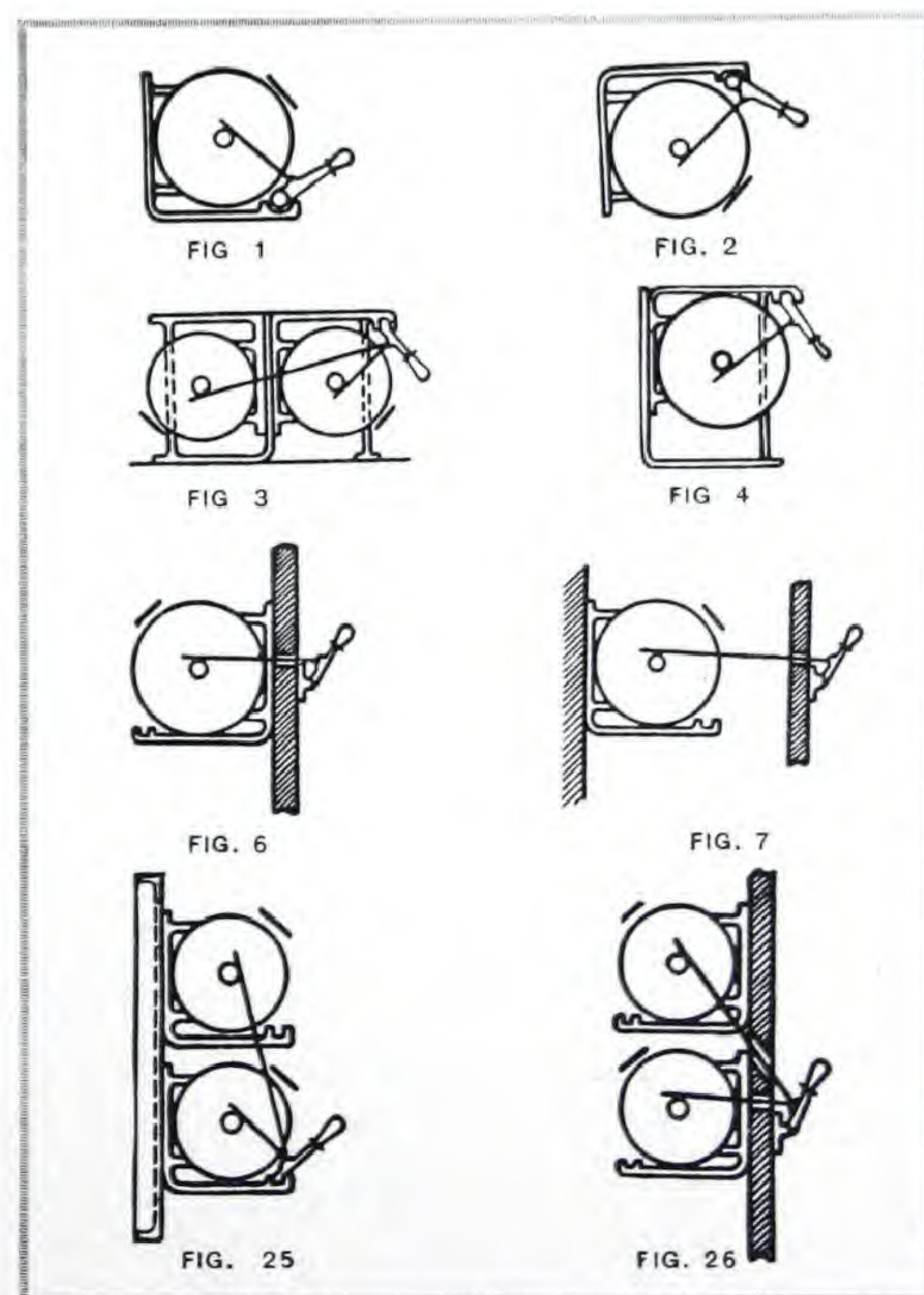


*Illustrating the ease with which C-H "Simplicity" Dimmers may be used in connection with dead front switchboards. This is known as Fig. 7 construction — see opposite.*

The plates used in dimmer equipment may be arranged with the operating levers assembled either above the plates or below them. In many installations the plates are located behind or away from the switchboard. The methods of mounting vary, but those usually employed are shown in the "thumb-nail" sketches below.

### Provision for control of portable spots, pockets, etc.

Present day practise makes use of a great number of flood lights or direct lighting units. The problem thus introduced, of anticipating a variable load on the pocket dimmer circuits may be adequately handled



*The standard methods of installing C-H "Simplicity" Dimmers are shown above. In specifying a particular style of mounting it should be referred to by the numbers given.*





by suitable installation of Cutler-Hammer "Simplicity" plates. The almost universal application of the 1000-watt and 500-watt "C" spot and flood light lamps to the use of portable stage lighting equipment enables the placing of each incandescent pocket receptacle on a dimmer with the layout so arranged that there are 1000-watt and 500-watt sections on both the prompt and off-prompt sides of the stage with markings on the pocket covers designating the dimmer capacity of each receptacle in the pocket. By the application of the Cutler-Hammer double side two lever dimmer plate, which requires practically only the same space as a single dimmer, the arrangement can be given further flexibility to meet the varying loads encountered. With this arrangement and the advantage of the fact that a lamp not fully blacked out will not give sufficient illumination to cast shadows

(thus the lamp for all intents and purposes might be entirely extinguished) it is possible to design a dimmer bank flexible enough for the most exacting operating requirements even though the pocket load may vary considerably.

The following table shows the illumination at partial loads:

Lamp Load in Per Cent of Dimmer Rating	Candle Power Vacuum Lamps	Candle Power Gas Filled Lamp
60%	1%	0%
40%	2%	1%
20%	3%	3%
10%	10%	13%
5%	35%	42%

## Typical specifications for the architect

1. Where indicated on the plans, there shall be installed a bank of "Simplicity" interlocking plate type dimmers.
2. The dimmer plates shall be substantially banked in a rigid iron frame. They shall be properly grouped in one or more rows in the same frame to permit the grouping of the individual dimmer operating levers in color sections.
3. A master control handle shall be provided for each group of color dimmer operating handles. A grand master control handle shall be supplied for the control of all stage dimmers. The dimmers for the house circuits shall be mounted in the same frame with the stage dimmers and shall be provided with a master lever. (In place of the grand master control handle of the stage dimmers, there should be provided a slow motion cross interlocking hand wheel control.)
4. The dimmer plates shall be of fire-proof material suitable for continuous operation at rated load, without undue heating or deterioration.
5. Each dimmer shall have sufficient resistance to dim the rated load of either gas filled or vacuum lamps, "black out," and shall provide a smooth, flickerless control throughout the entire dimming range from "full-bright" to "black-out."
6. The contact brushes shall be of suitable material and design to operate without objectionable noise and without the necessity of lubrication.
7. The dimmer banks shall be so constructed and mounted to bring the operating handles within easy operating reach of the operator. The dimmer terminals shall be readily accessible for wiring and shall be supported at least one-half inch from any grounded metal.

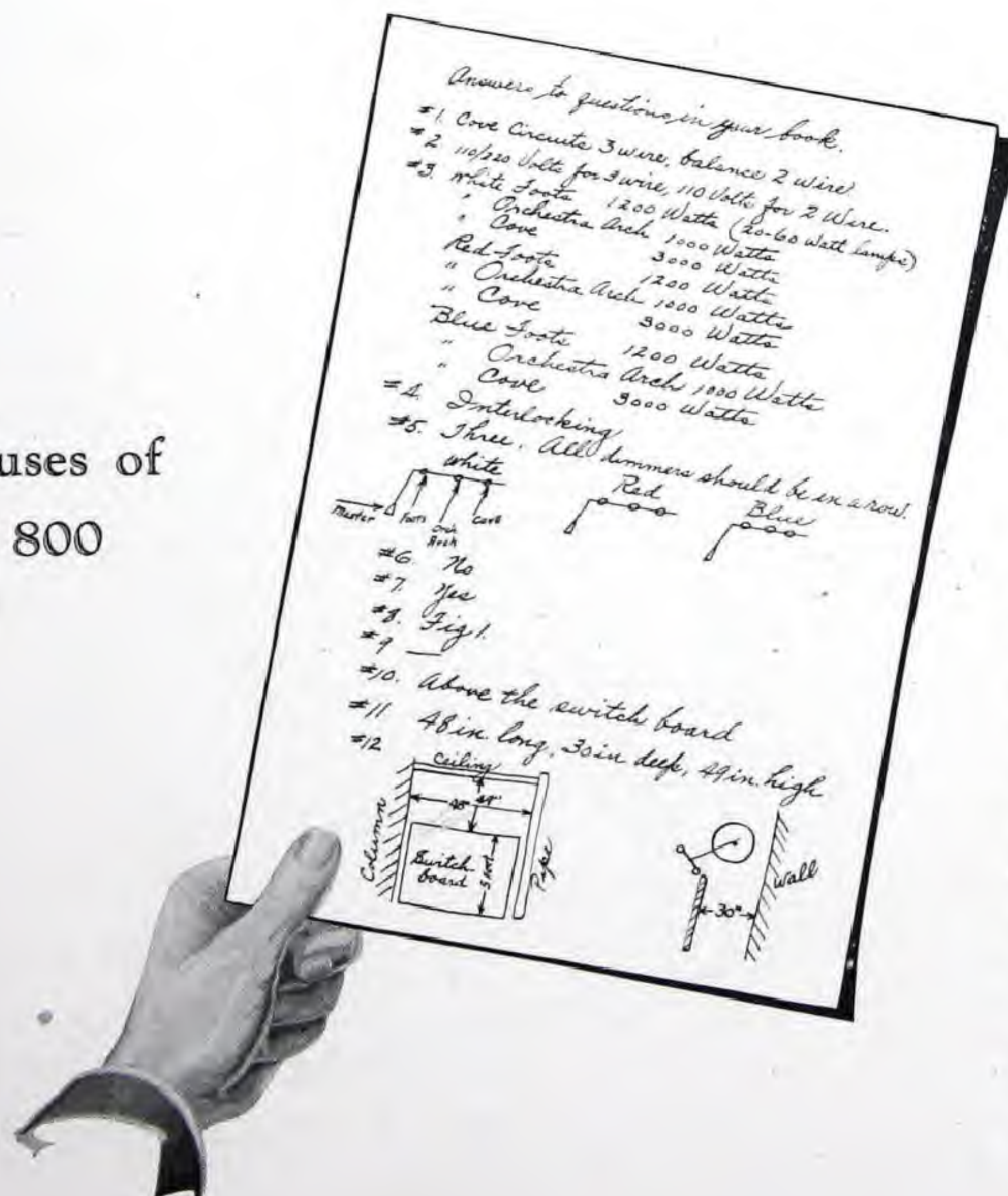


## Information required when ordering

**B**EFORE we can quote price or fill orders it is necessary that the following questions be answered. To assist in determining the kind of answers required we show, on pages 27, 28 and 29 reproductions of some we have received. These have been picked to show typical specifications for a small, medium and large house.

- (1) Will dimmer circuits be 2 wire or 3 wire?
- (2) What is the voltage?
- (3) Give number of lamps and wattage of each or total wattage of all lamps to be controlled by each dimmer. Tabulate in the order in which you prefer to have the handles mounted, from left to right when facing same.
- (4) Do you want operating levers to be interlocking or non-interlocking?
- (5) If interlocking levers are desired, do you want more than one master lever? If so, state how many, and send rough sketch showing groups of dimmers to be controlled by each.
- (6) In addition to the master levers do you want slow wheel drive as illustrated on page 11?
- (7) Do you want operating levers equipped with circuit indicating labels as described on page 23?
- (8) Give construction desired, referring to figure number of illustration as given on page 25.
- (9) If figure six or twenty-six construction, advise if steel front is desired.
- (10) Where is dimmer to be mounted, in relation to switchboard?
- (11) What are dimensions of available space for mounting the dimmer?
- (12) Make rough sketch giving dimensions of switchboard and dimensions of space in which dimmer is to be mounted.

For houses of  
500 to 800  
seats.



These are typical specifications for a house with a seating capacity of 600. Given the same information, C-H engineers can successfully design just the right type of dimmer installation. The dimmer furnished according to these specifications would also be suitable for houses with seating capacities of from 500 to 800. This dimmer bank would require a space of about 44 inches long, 22 inches high and 22 inches deep.



# Typical specifications as received

#1. Will dimmer circuits be 2 wire or 3 wire?  
*Main service to the switchboard as 3 Wire. The service will be divided at the switchboard and the dimmers can all be designed for 2 Wire connections*

#2. What is the voltage?  
*110 Volts*

#3. Give number of lamps and ratings of each or total wattage of all lamps to be controlled by each dimmer. Tabulate in the order in which you prefer to have the handles mounted, from left to right when facing stage.

Dimmer	Lamps	Wattage
White Foots #1	4000	4000 Watts
White Foots #2	3600	3600
White Foots #3	3600	3600
Left Pockets	1000	1000
Right Pockets	1000	1000
Red Foots #1	4000	4000
Red Foots #2	2400	2400
Red Foots #3	2400	2400
Left Pockets	1000	1000
Right Pockets	1000	1000
Blue Same as Red	7200	7200 Watts
House Main Ceiling Cove	3600	3600
Balcony Lights	1500	1500
4 Brackets each		

#4. Do you want operating levers to be interlocking or non-interlocking?  
*Interlocking*

#5. If interlocking levers are desired, do you want more than one master lever? If so, state how many, and send rough sketch showing groups of dimmers to be controlled by each.

*Four Masters*

Group	Color	Levers
WHITE	WHITE	LOOOOO
RED	RED	LOOOOO
BLUE	BLUE	LOOOOO
HOUSE	HOUSE	LOOOOO

For houses  
 of 1000 to  
 1500 seats.

These are typical of the specifications received for houses with seating capacities of 1000 to 1500. This dimmer bank would require a space of about 7 feet long, 4 feet high and 2 feet deep.

#6. In addition to the master levers do you want slow wheel drive as illustrated on page 117?  
*No but a second master lever is required, to permit operating any or all dimmers simultaneously*

#7. Do you want operating levers equipped with circuit indicating labels as described on page 23?  
*Yes*

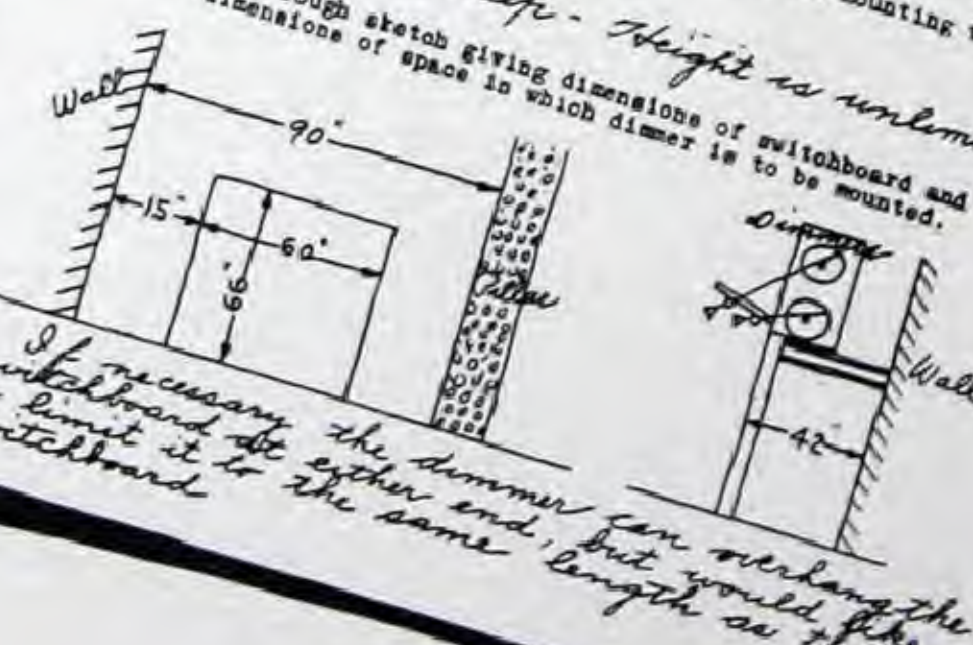
#8. Give construction desired, referring to figure number or illustration as given on page 28.  
*Refer an arrangement similar to figure #26 except that the levers should be in two rows as shown by sketch, in order to bring them as close together as possible*

#9. If figure six or twenty-six construction, advise if steel front is desired.  
*Sheet steel front should be provided*

#10. Where is dimmer to be mounted, in relation to switchboard?  
*Dimmer is to mount above the switchboard so that the steel front will line up with the face of the switchboard*

#11. What are dimensions of available space for mounting the dimmer?  
*90" long - 42" deep - Height is unlimited*

#12. Make rough sketch giving dimensions of switchboard and dimensions of space in which dimmer is to be mounted.



*If necessary the dimmer can overlap the switchboard at either end, but would like to limit it to the same length as the switchboard*



from theater owners & architects

For houses of  
2500 seats  
or more.

#1. Will dimmer circuits be 2 wire or 3 wire?  
Some 2 wire and some 3 wire as we will specify in the circuit tabulation.

#2. What is the voltage?  
110 Volts for 2 wire and 110/220 for 3 wire circuits.

#3. Give number of lamps and wattage of each or total wattage of all lamps to be controlled by each dimmer. Tabulate in the order in which you prefer to have the handles mounted, from left to right when facing stage.

Number	Color	Location	Wattage	Wire
1	Amber	Foots	3000	2 wire
2	"	Border #1	2400	"
3	"	" #2	2400	"
4	"	" #3	2400	"
5-8	"	Pockets	4- 1000	"
11	Red	Foots	3000	"
12	"	Border #1	2400	"
13	"	" #2	2400	"
14	"	" #3	2400	"
15-18	"	Pockets	4- 1000	"
21-28	Blue	-	-	-
31-38	Green	-	-	-
51	White	Ceiling Cove	10000	3 wire
52	"	Balcony Cove	8000	"
53	"	Grills	7200	"
54	"	"	5000	"
61	Red	Ceiling Cove	10000	"
62	"	Balcony Cove	8000	"
63	"	Grills	7200	"
64	"	"	5000	"
71-74	Blue	-	-	-

#4. Do you want operating levers to be interlocking or non-interlocking?  
Interlocking.

#5. If interlocking levers are desired, do you want more than one master lever? If so, state how many, and send rough sketch showing groups of dimmers to be controlled by each. One master lever for each color in the stage section, and also one for each color in the house section. Seven in all.

Color	Stage	House
Amber	Y	Y
Red	Y	Y
Blue	Y	Y
Green	Y	Y

#6. In addition to the master levers, do you want slow wheel drive as illustrated on page 11?

Must have slow motion drive.

#7. Do you want operating levers equipped with circuit indicating labels as described on page 23?

The indicating labels should be colored and should bear the number specified for each circuit in the tabulation under item #3.

#8. Give construction desired, referring to figure number of illustration as given on page 25.

Similar to number 26, but the stage levers should be in four rows, one color per row, and the house levers should be in three rows.

#9. If figure six or twenty-six construction, advise if steel front is desired.

Steel front must be furnished in relation to switchboard.

#10. Where is dimmer to be mounted

Above the switchboard.

#11. What are dimensions of available space for mounting the dimmer?

Eleven feet nine inches long, forty-six inches deep, and eight feet high. If possible the length of the dimmer should be limited to 10 feet, but it can overhang the switchboard at the right over the passageway, if necessary.

#12. Make a rough sketch giving dimensions of switchboard and dimensions of space in which dimmer is to be mounted.

Operating levers should be as low as possible so that the operator can easily reach them

*For houses with seating capacities of 2500 or more, these typical specifications enable the proper selection of dimmer equipment necessary to handle such larger installations. The dimmer for a house of 2500 would be about 10 feet, 11 inches long, 70 inches high and 24 inches deep.*



## C-H Portable Dimmers

for the small theater, traveling show, private playhouse, hall or residence

**P**ORTABLE C-H dimming equipment, in the various forms shown, fills the lighting control needs of the traveling show, small theater, private playhouse or hall efficiently and with nearly the same perfection of dimming supplied by the larger "Simplicity" installations in leading theaters throughout the country.

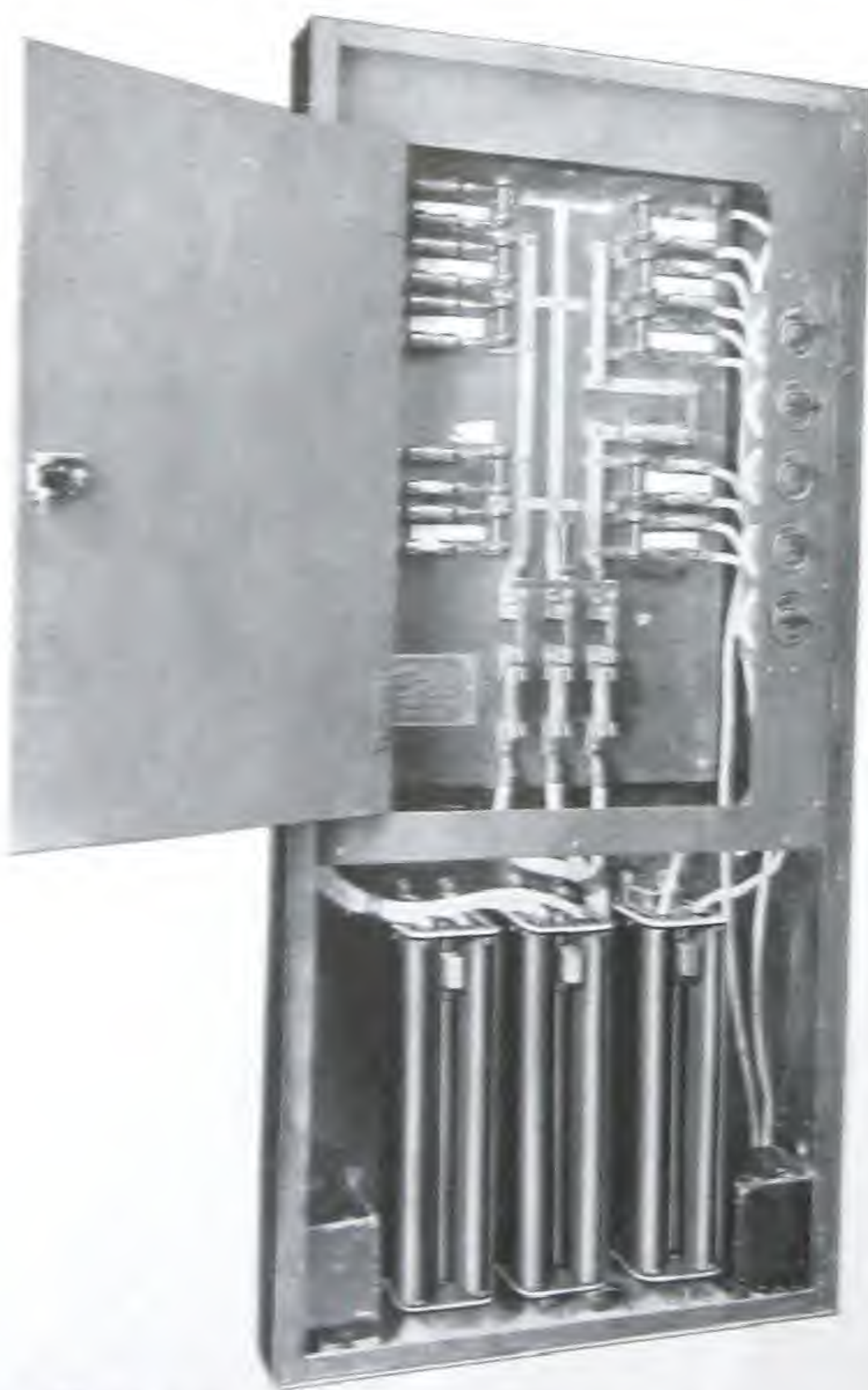
For the use of traveling shows, and for augmenting dimmer equipment already installed, small, compact cases are made, which enclose Cutler-Hammer



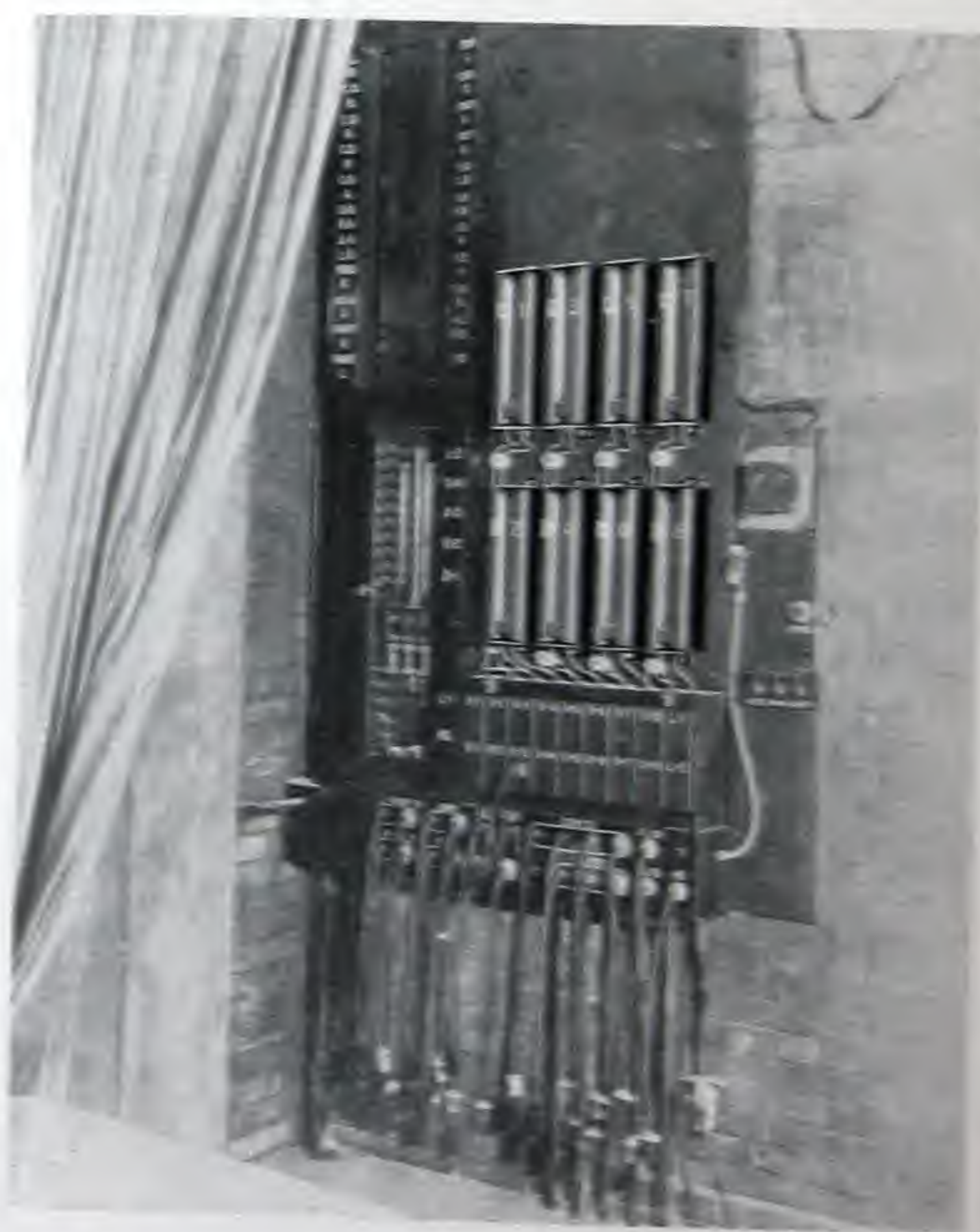
*A Cutler-Hammer Slider Type Resistance Dimmer adapted for use in portable dimming equipment. These come in two sizes, of 300 and 1,000 watt capacities.*

Slider Dimmers for dimming lights in the playhouse in which the company performs. Each case is complete for shipping and provided with the necessary cable for plugging into the lighting circuits.

The Cutler-Hammer Slider Dimmers are made in two sizes, of 300 and 1,000 watt capacities respectively.



*Showing the adaptation of C-H Portable Dimmers for switchboard mounting in small private theaters. This installation at the Lenox School, N. Y. C., is very compact and fully enclosed for safety.*



*An installation of C-H Portable Dimmers mounted two rows high on the switchboard in the Playhouse at Lewellyn Park, Orange, N. J.*



The dimmers of the larger size are only 20 inches high. Each dimmer circuit is equipped with an enclosed switch which is mounted above the dimmer. The dimmer sliders may be moved independently or simultaneously by means of an interlocking bar extending almost the length of the case.

An application of circular plate dimmers installed in a portable shipping case is shown on this page. This is a high capacity outfit and is built complete with enclosed switches, interlocking control, master lever, and cable for plugging in.

Combination outfits incorporating both the slider type and circular plate type dimmers are highly flexible and complete, the slider type dimmers serving for spotlight control while the circular plates handle circuits in the foots, strips, borders, etc.

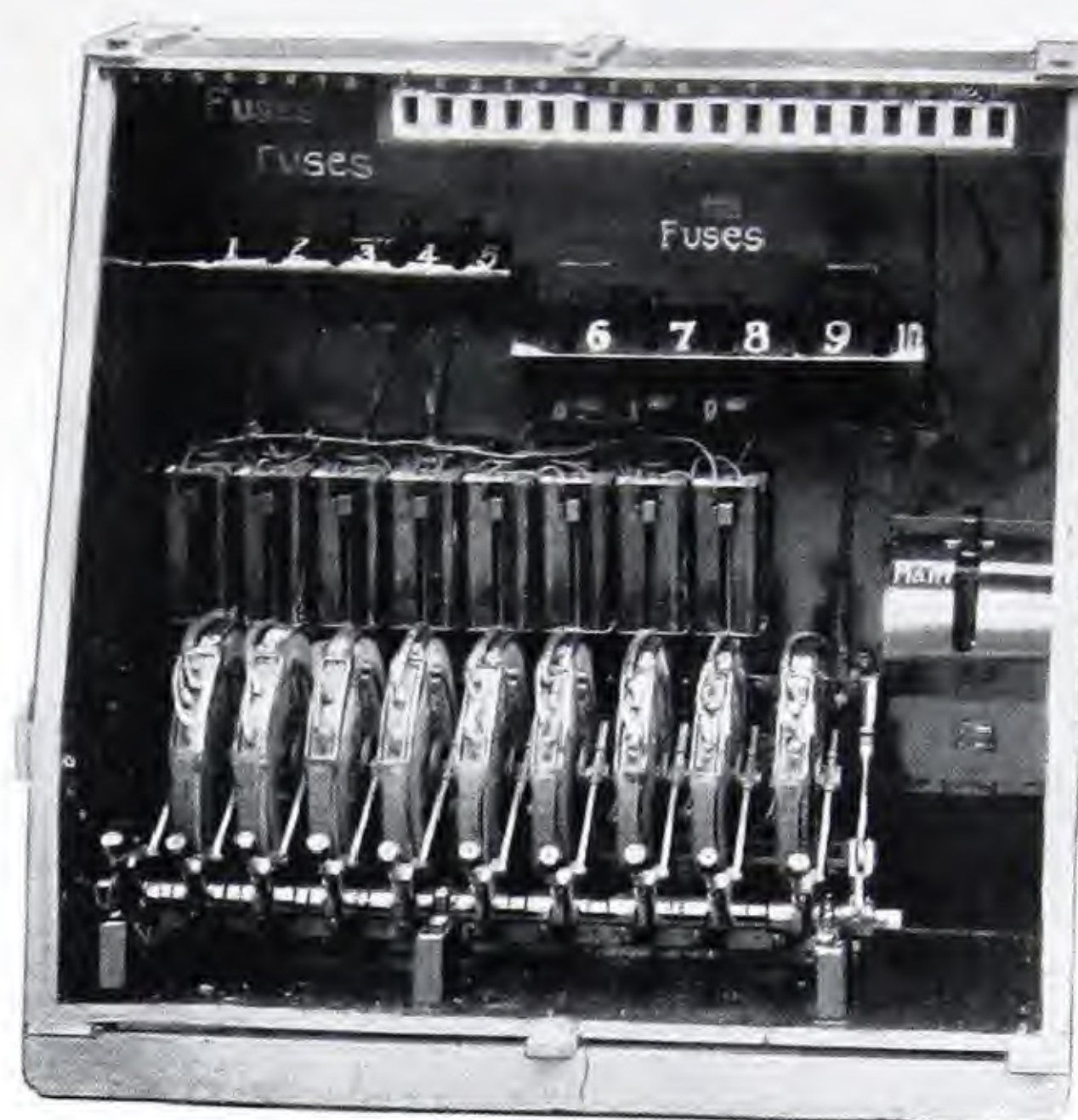
The C-H Slider Dimmers can also be grouped and used in permanent installations for smaller playhouses, halls and private residences as shown in the accompanying illustrations. They furnish high grade and adequate lighting control for such purposes.

The round plate dimmer shown, is also suitable for wall mounting in lodge halls, churches and similar places. Supplied with either one or two plates,

the standard dimmer is arranged for mounting directly against the wall or switchboard with the operating lever in front. By the use of a special bracket, however, it can be mounted perpendicular to the wall

where space limitations require it. These dimmers are capable of controlling metallic filament lamps up to a total load of 2640 watts. They may be used with either direct or alternating current in continuous duty. All live parts are fully enclosed for neatness and safety.

The compact construction of all the above C-H dimmer types makes them especially applicable for portable illumination control equipment.



*Showing one-half of a C-H Portable Dimmer equipment made in two sections, each of which can be checked as baggage when accompanying the company on the road. By use of this equipment the stage lighting is installed. The sixteen slider type dimmers are in baby spot light circuits. The round plate dimmers control circuits in the foots, strips and borders.*



*The C-H Slider Type Dimmer is particularly adaptable for control of portable spotlights. Fixed to the standard as shown, its operation does not tend to tip over or jar the light.*



*C-H Circular Plate Dimmer with moulded resistor plate for wall mounting in lodge halls, churches, etc. All live parts are fully enclosed for neatness and safety.*





## Other Cutler-Hammer products used in theaters, halls, auditoriums, schools, hotels and similar public gathering places



CUTLER-HAMMER engineers have also developed a complete line of control apparatus for all the electrical units now used in modern buildings; such units as air compressors, refrigerating machines, pumps, ventilating systems, etc. These engineers will be glad to help you, or your architect, solve any of the electrical problems which may confront you.

All Cutler-Hammer apparatus is designed to stand up under unusually severe service. All current carrying parts are amply proportioned. Both resistor and metallic parts are protected against the effects of moisture. This is of particular advantage when controllers are mounted in damp locations.

Here is a typical list of some of the control which Cutler-Hammer has furnished for use in theaters, halls, auditoriums, schools, hotels and similar gathering places.

### *Float Switches*

For sprinkler systems, sump service, etc. Control the level of the water automatically. Tank operation starts the pump motor at low level and stops it at high level. Sump operation starts the motor at high level and stops it at low level.

### *Pressure and Vacuum Regulators*

For automatically controlling motors driving pumps, compressors, etc. Can be used on systems containing air, gas, water, or any other fluid not injurious to the copper diaphragm.



*C-H 9580 Magnetic Switch especially adapted for use in connection with remote control and pre-selection boards in theater dimmer installations.*



*A bank of Cutler-Hammer Fan Controllers in the Rialto Theater, Louisville, Ky.*

### *Remote Control Switches*

For automatically controlling groups of lighting circuits from one or more remote push button stations located in box office, manager's office, etc. Also used to control large building and theater signs from remote points such as box office, etc.

### *Starters and Speed Regulators*

For motor-driven machines of any kind, including blowers, fans, pumps, curtain hoists, ash lifts, electric elevators, etc.

### *Generator Field Rheostats*

For motor-generator sets to adjust voltage.

### *Electro-Magnets*

For special stunts — as on wall (concealed) so that actor with metal vest can be hung up with apparently no means of support.

### *Resistors*

For projection machines.

### *Electric Strip Heaters*

Two feet long and flat like a ruler, for heating isolated, exposed ticket booths, valve houses on fire sprinkler systems, etc.

*Electric Lamp Sockets, Switches, Receptacles, Plugs, etc.*





# A partial list of installations of C-H "Simplicity" Theater Dimmers

*The fact that the largest and most modern theaters in the country choose Cutler-Hammer Theater Dimmers in planning their lighting control equipment only substantiates the fact that they are the most satisfactory, dependable and economical dimmers, over a period of years, for theaters of any size, large or small.*



*Users of Cutler-Hammer Dimmers not only obtain the best results to attract and please their patrons but are assured of minimum cost because of long life and maintenance expense that is practically nil.*

*The view shown is of the mammoth new Paramount Theater and Office building, New York City. Rapp and Rapp, architects.*

## "It reads like a directory of theaters"

### Aberdeen, Wash.

Liberty Theater  
Tokay Theater

### Akron, Ohio

East Market Garden Dance Hall  
Keith's Theater

### Alhambra, Calif.

Bard's Garfield Theater

### Alexandria, La.

Rapides Opera House

### Allentown, Pa.

Allentown Theater  
New Colonial Theater  
Majestic Theater

### Allston, Mass.

Allston Theater

### Altoona, Pa.

Mishler Theater

### Amherst, Mass.

Agricultural School

### Ann Arbor, Mich.

Masonic Temple

### Ansonia, Conn.

Ansonia Theater

### Arkansas City, Kansas

Burford Theater

### Asbury Park, N. J.

Proctor Jones Theater

### Asheville, N. C.

A. & A. S. E. Lodge

### Astoria, L. I., N. Y.

Astoria Theater

### Atlanta, Ga.

Howard Theater  
Fulton High School

### Aurora, Minn.

Aurora High School

### Baltimore, Md.

Century Theater  
Knights of Columbus Auditorium

### Baton Rouge, La.

Columbia Theater

### Bay City, Mich.

Central High School  
Wenonah Theater

### Bayonne, N. J.

DeWitt Theater

### Beardstown, Illinois

Beardstown High School

### Bellingham, Wash.

American Theater

### Bell, Calif.

Bell Union High School

### Belleville, Ill.

Lincoln Theater  
New Academy Theater

### Benton Illinois

Hippodrome Theater

### Berkeley, Calif.

Chimes Theater

### Beverly, Mass.

Beverly High School

### Bingham Canyon, Utah

High School

### Birmingham, Ala.

Frolic Theater  
John Herbert Philips High School

Masonic Temple

Temple Theater

### Bloomington, Ill.

Bloomington Consistory  
Majestic Theater

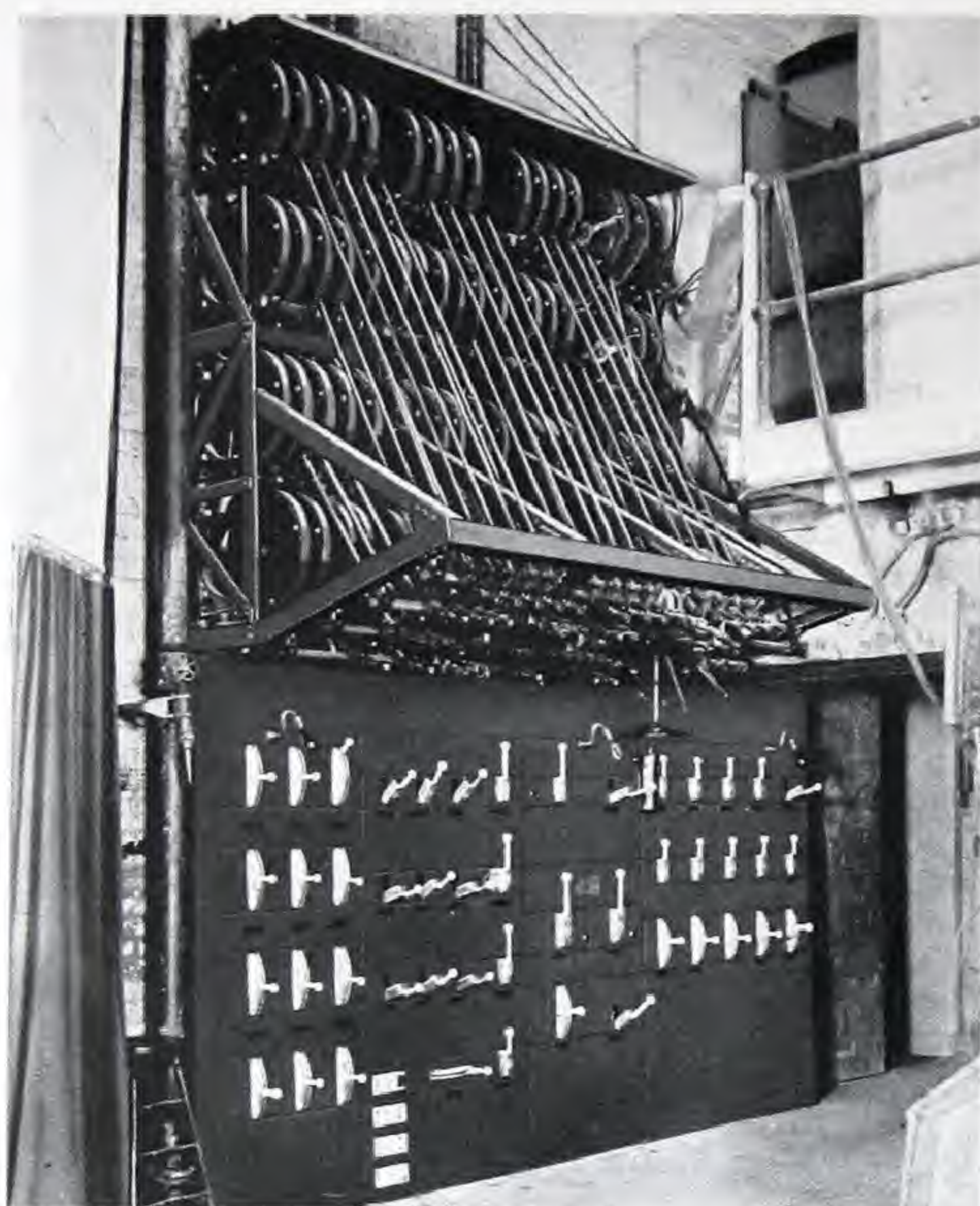
### Bloomfield, N. J.

Coliseum

### Boston, Mass.

Arlington Theater  
Boston Consistory  
Boston Masonic Temple  
Boston Opera House  
Codman Square Theater  
Colonial Theater  
Commonwealth Olympia (Allston)  
Copley Repertoire  
Columbia Theater  
Cyclorama Bldg.  
Egleston Square Theater  
Fenway Theater  
Franklin Park Theater  
Gaiety Theater  
Globe Theater  
Gordon's Olympia Theater  
Grand Opera House  
Keith's Theater, Washington St.  
Lancaster Theater  
Loew's New Columbia Theater  
Loew's Orpheum Theater  
Modern Theater  
Park Theater  
Plymouth Theater





*An attractive dimmer layout and installation in the Masonic Temple, Detroit. Minimum space is taken by installing the dimmers above the switch-board.*

#### Boston (continued)

Scollay Square Olympia Theater  
Shawmut Theater  
St. James Theater  
Shubert Theater  
Strand Theater  
Tremont Theater  
Waldorf Theater  
Wilbur Theater

#### Bremerton, Wash.

Liberty Theater  
Masonic Temple

#### Bridgeport, Conn.

Warren Harding High School  
Polis Theater

#### Brockton, Mass.

City Theater  
Olympia Theater

#### Brookline, Mass.

Boston College

#### Brooklyn, N. Y.

Bay Bridge Theater  
Gates Avenue Theater  
Keap Street Theater  
Keeney's Bay Bridge Theater  
Keith's Greenpoint  
Keith's Prospect  
Republic Theater  
Saratoga Avenue Theater  
St. John's School  
Terminal Theater

#### Brownsville, Pa.

Wright Amusement Co.

#### Buffalo, N. Y.

Buffalo Consistory  
Lafayette Theater  
Loew's State  
Majestic  
Shea's Buffalo  
Shea's Vaudeville  
Shea's Hippodrome  
Shea's North Park  
Shubert's Tech.

#### Butte, Mont.

Masonic Temple

#### Cambridge, Mass.

Central Square Theater  
Masonic Temple

#### Canton, Ohio

Masonic Temple

#### Carbondale, Pa.

Carbondale Theater

#### Casper, Wyoming

High School

#### Champaign, Ill.

Champaign Theater

#### Chanute, Kansas

Kansas Memorial Building

#### Charleston, Mass.

Thompson Theater

#### Charleston, Pa.

Kearse Theater

#### Charleston, W. Va.

Masonic Temple  
Scottish Rite  
Virginia Theater

#### Charlotte, N. C.

Graver Theater

#### Chattanooga, Tenn.

Tivoli Theater

#### Chelsea, Mass.

Olympia Theater

#### Chicago, Ill.

Alvernia High School  
Apollo Theater  
Art Institute  
Auditorium Theater  
Austin High School  
Banner Blue Lodge  
Blackstone Theater  
Capitol Theater  
Carter Harrison High School  
Central Park Theater  
Crane Technical High School  
Chicago Theater  
Diversey Theater  
Driscoll's Danceland  
Garrick Theater  
Goodman Hall, Art Institute  
Granada Theater  
Harding Theater  
Harris Theater  
Howard Theater  
Hyde Park High School  
Illinois Theater  
K. C. of Memorial Bldg.  
Lakeview High School  
LaSalle Theater  
McVicker's Theater  
Marshall Square Theater  
Medinah Temple  
Mercy High School  
Milwaukee Sawyer Theater  
Municipal Auditorium Tuberculosis Sanitarium  
Nicholas Senn High School  
Olympic Theater  
Orchestra Hall  
Palace Theater  
Pantheon Theater  
People's Theater  
Pershing Palace Cafe  
Princess Theater  
Ravinia Theater  
Riviera Theater  
Roosevelt Theater  
Sawyer Theater  
Selwyn Theaters  
Senate Theater  
State-Lake Theater  
Stratford Theater  
Studebaker Theater  
Terminal Theater  
Tivoli Theater  
Uptown Theater  
West Englewood Theater  
Willibrink Theater  
Woods Theater  
Woodlawn Theater

#### Chicago Heights, Ill.

Lincoln-Dixie Theater

#### Chisholm, Minn.

Chisholm Jr. High School

#### Cincinnati, Ohio

B. F. Keith's Theater  
Capitol Theater  
Cox Theater  
Olympic Theater  
Orpheum Theater  
Grand Opera House  
Lyric Theater  
Palace Theater  
Strand Theater  
Walnut Theater

#### Clarksburg, W. Va.

F. R. Moore Theater  
Robinson Grand Theater

#### Cleveland, Ohio

Allen Theater  
Bandbox  
Columbia Theater  
Hanna Theater  
Heights Masonic Temple  
Hippodrome Theater  
Keith's Palace  
Keith's 105th St. Theater  
Keith's Theater  
Masonic Temple  
Old B. of L. E. Bldg., Auditorium  
Loew's Park  
State Theater  
Stillman Theater  
Woodward Masonic Temple

#### Clinton, Mass.

Philbin Theater

#### Clinton, Okla.

New Theater

#### Coffeyville, Kansas

Coffeyville High School

#### Columbus, Miss.

Princess Theater

#### Columbus

James Theater

#### Concord, Mass.

Concord Armory  
Concord Masonic Temple

#### Council Bluffs, Iowa

Broadway Theater

#### Dallas, Texas

Fair Park Auditorium  
Hope Theater  
Majestic Theater  
Methodist Church  
Palace Theater

#### Danville, Ill.

Danville High School

#### Davenport, Iowa

Capitol Theater

#### Dayton, Ohio

B. F. Keith's Theater  
Masonic Temple

#### Deland, Fla.

Deland Amusement Co.

#### Denver, Colo.

America Theater  
Colorado Theater  
Consistory  
Denham Theater  
El Jebel Theater  
Rivoli Theater  
Victoria Theater





**Des Moines, Iowa**  
Alhambra Theater  
Theater & Office Building  
Women's Club

**Detroit, Mich.**  
Adams Theater  
Broadway Strand Theater  
Book Cadillac Hotel  
Cass Technical High School  
Castle Theater  
Central High School  
Cinderella Theater  
Colonial Theater  
Dawn Theater  
Detroit Edison Auditorium Bldg.  
Detroit Masonic Temple  
Detroit Opera House  
Eastern High School  
Ferry Field Theater  
General Motors Building  
Grand Riveria Theater  
Grande Theater  
Harmony Theater  
Holy Redeemer Church  
Hotel Tuller  
Hutchins School  
I. O. O. F. Temple  
Joyce School  
Jesse Bonstelle Playhouse  
Kovinsky Theater  
Keith's Theater  
Madison Theater  
Masonic Temple  
Meretsky Theater  
Miller School  
National Theater  
Nordstrom School

**Detroit (Continued)**  
Orchestra Hall  
Play House  
Plaza Theater  
Rivoli Theater  
Sacred Heart Academy High School  
Tuxedo Theater

**East St. Louis, Ill.**  
Lyric Theater  
Masonic Temple

**Easton, Pa.**  
Wilmer & Vincent

**Eldorado, Ark.**  
Eldorado High School

**Elgin, Ill.**  
Rialto Theater

**Elizabeth, N. J.**  
Regent Theater

**Elkhart, Ind.**  
Elkhart High School

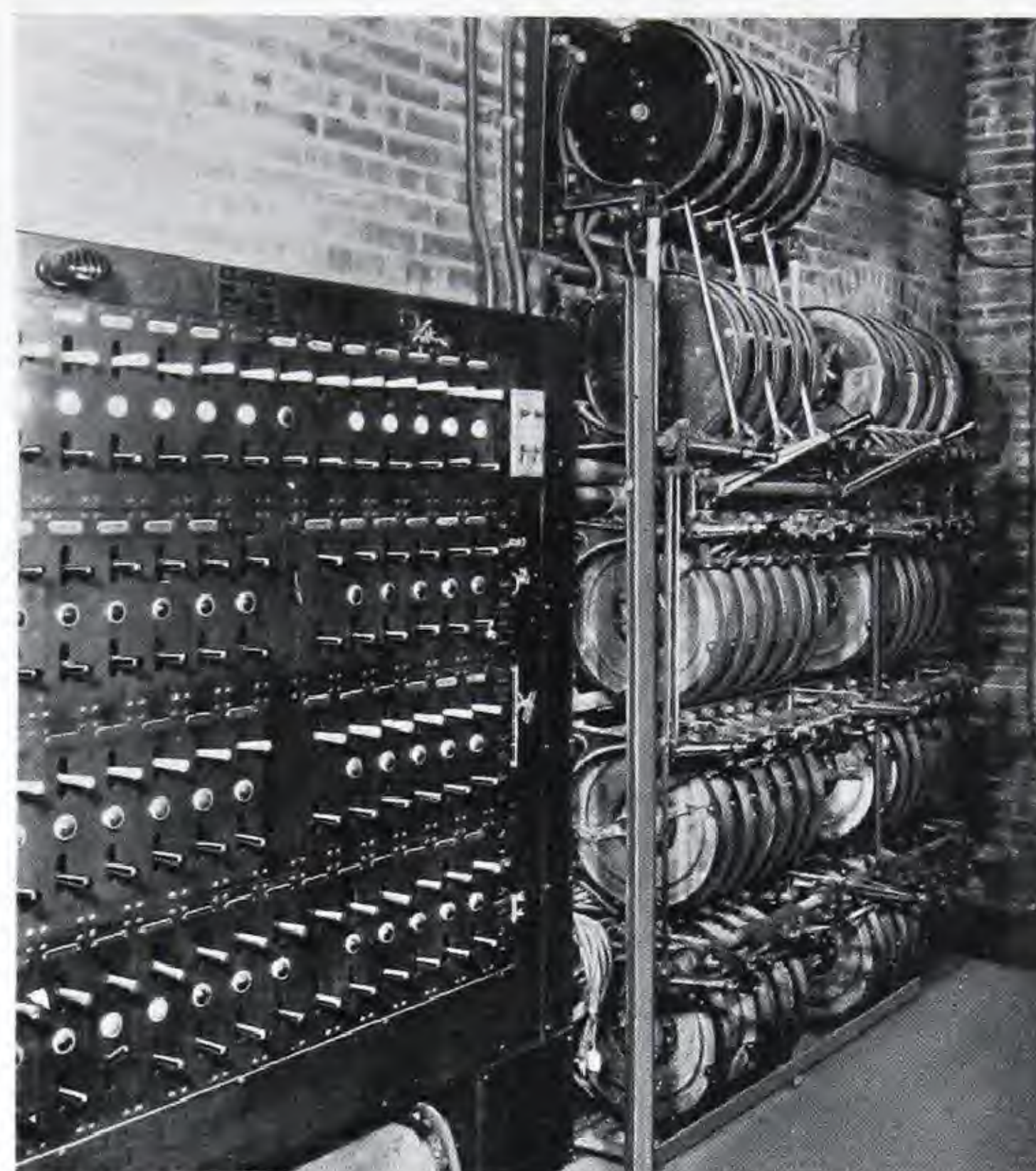
**Elmira, N. Y.**  
State Theater

**Elmhurst, L. I., N. Y.**  
Elks Lodge

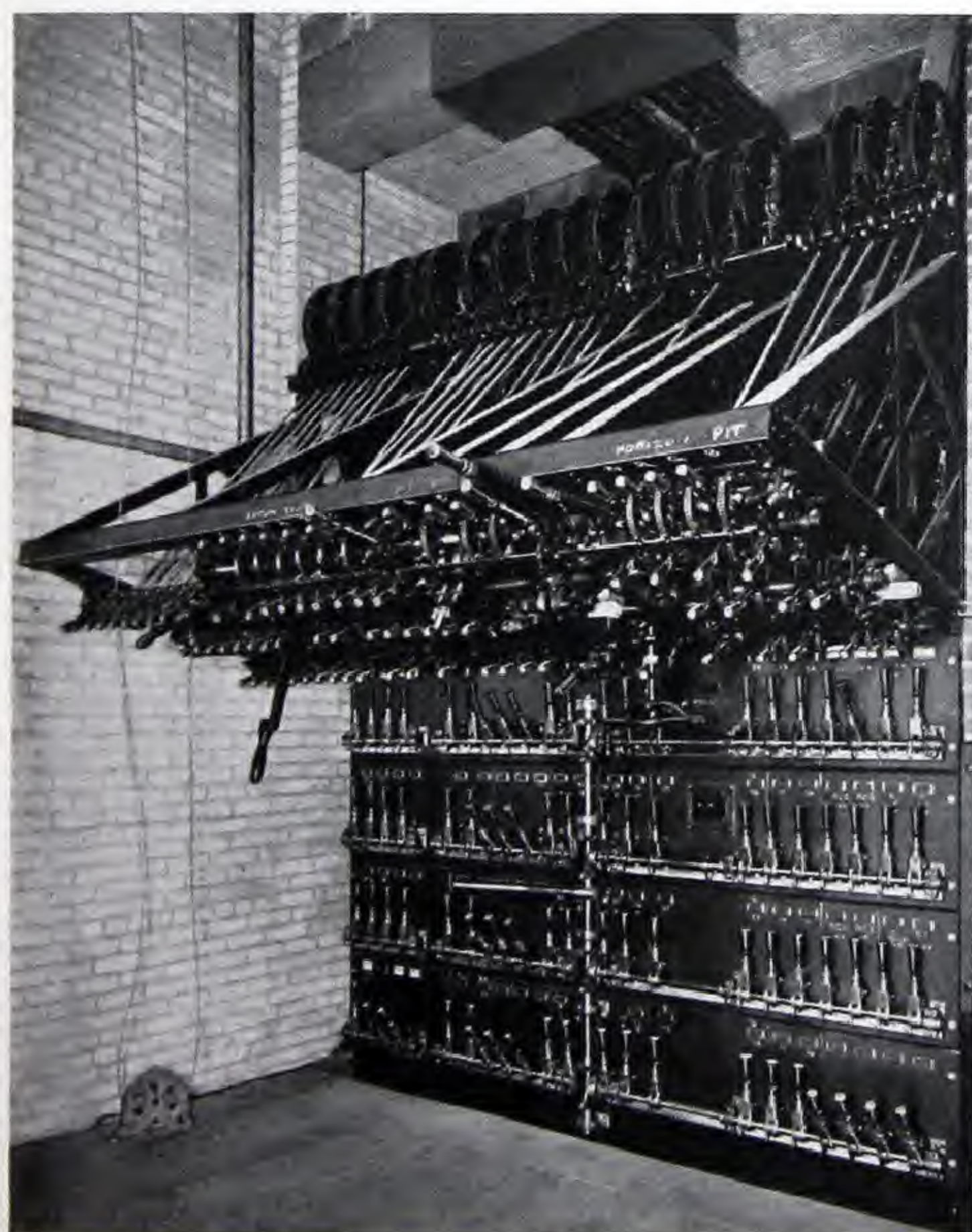
**Eureka, Kans.**  
Memorial Home

**Evansville, Ind.**  
Victory Theater

**Everett, Wash.**  
Everett Theater  
Elks Club



*Showing the banks of "Simplicity" Theater Dimmers which control the lighting in the B. F. Keiths Rialto Theater, Louisville, Ky. The board is a Major (F. A.)*



*Showing C-H Dimmer installation at the Repertory Theater, Boston.*

**Fairmont, W. Va.**  
Fairmont Theater  
Virginia Theater

**Fall River, Mass.**  
Empire Theater

**Flint, Mich.**  
Flint High School

**Fort Madison, Iowa**  
High School

**Fort Scott, Iowa**  
Masonic Temple

**Fort Scott, Kans.**  
Ancient Order Scottish Rite

**Ft. Wayne, Ind.**  
Masonic Temple  
Mizpah Temple

**Fox River Grove, Ill.**  
Fox River Grove Dance Hall

**Framingham, Mass.**  
W. George Theater

**Freeport, Ill.**  
Dittman Theater

**Fresno, Calif.**  
Wilson Theater

**Fullerton, Calif.**  
Chapman Theater

**Gardiner, Me.**  
Gardiner Theater

**Greensburg, Pa.**  
Strand Theater

**Hammond, Ind.**  
Parthenon Theater

**Hanford, Calif.**  
Hanford Civic Auditorium

**Hanover, N. H.**  
Dartmouth College

**Harrisburg, Pa.**  
Orpheum Theater

**Hartford, Conn.**  
Polis Theater  
State Library

**Haverhill, Mass.**  
Academy of Music

**Hibbing, Minn.**  
Hibbing High School

**Hinsdale, Ill.**  
St. Joseph's Seminary

**Holyoke, Mass.**  
Masonic Temple  
Victory Theater

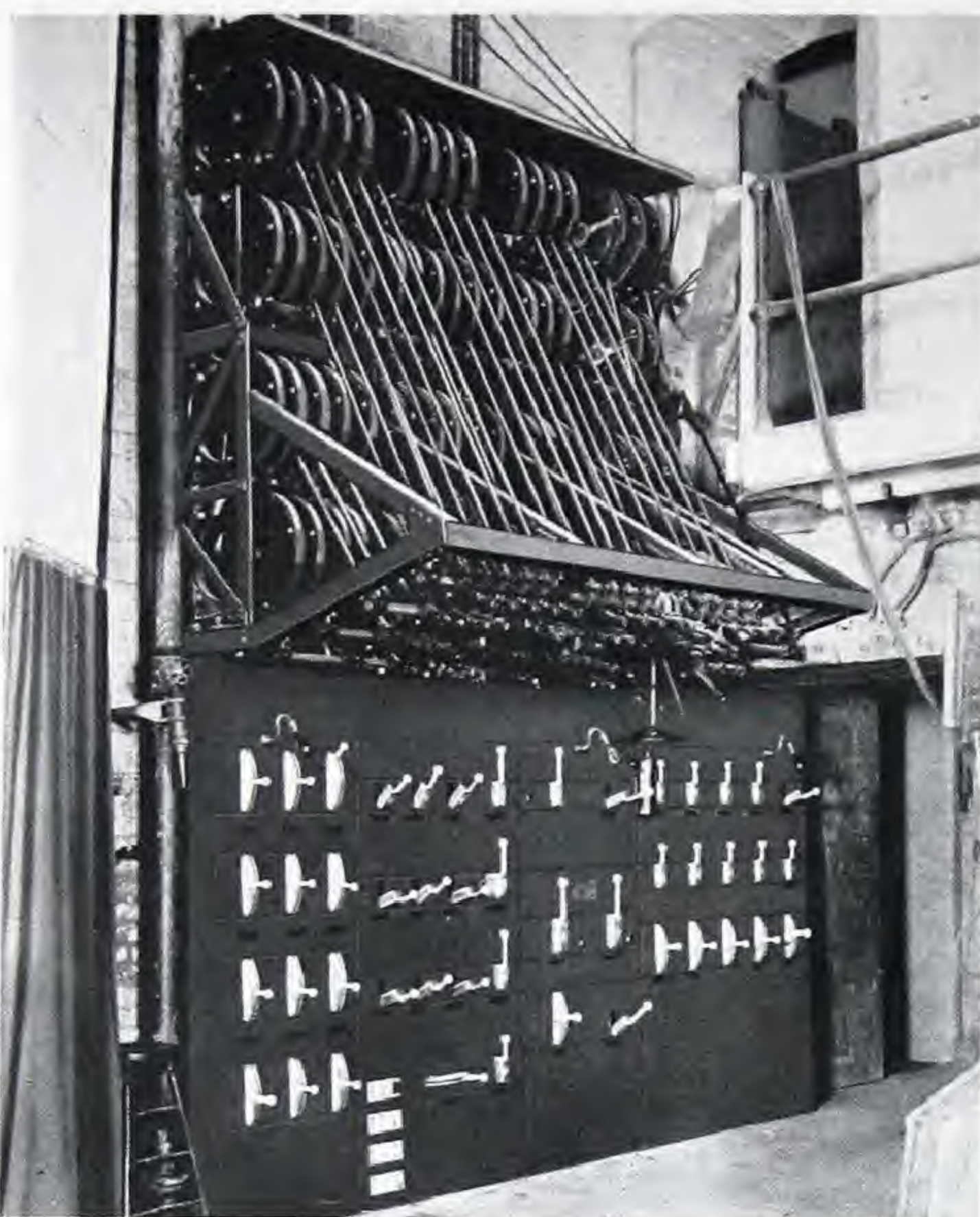
**Hamilton, Ohio**  
Scottish Rite

**Honolulu, Hawaii**  
Alpha Theater

**Hoquiam, Wash.**  
Masonic Temple

**Houston, Texas**  
Auditorium Theater  
Majestic Theater  
Scottish Rite Cathedral





*An attractive dimmer layout and installation in the Masonic Temple, Detroit. Minimum space is taken by installing the dimmers above the switch-board.*

**Boston (continued)**  
 Scollay Square Olympia  
 Theater

Shawmut Theater  
 St. James Theater  
 Shubert Theater  
 Strand Theater  
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 Waldorf Theater  
 Wilbur Theater

**Bremerton, Wash.**

Liberty Theater  
 Masonic Temple

**Bridgeport, Conn.**

Warren Harding High School  
 Polis Theater

**Brockton, Mass.**

City Theater  
 Olympia Theater

**Brookline, Mass.**

Boston College

**Brooklyn, N. Y.**

Bay Bridge Theater  
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 Keap Street Theater  
 Keeney's Bay Bridge Theater  
 Keith's Greenpoint  
 Keith's Prospect  
 Republic Theater  
 Saratoga Avenue Theater  
 St. John's School  
 Terminal Theater

**Brownsville, Pa.**

Wright Amusement Co.

**Buffalo, N. Y.**

Buffalo Consistory  
 Lafayette Theater  
 Loew's State  
 Majestic  
 Shea's Buffalo  
 Shea's Vaudeville  
 Shea's Hippodrome  
 Shea's North Park  
 Shubert's Tech.

**Butte, Mont.**

Masonic Temple

**Cambridge, Mass.**

Central Square Theater  
 Masonic Temple

**Canton, Ohio**

Masonic Temple

**Carbondale, Pa.**

Carbondale Theater

**Casper, Wyoming**

High School

**Champaign, Ill.**

Champaign Theater

**Chanute, Kansas**

Kansas Memorial Building

**Charleston, Mass.**

Thompson Theater

**Charleston, Pa.**

Kearse Theater

**Charleston, W. Va.**

Masonic Temple  
 Scottish Rite  
 Virginia Theater

**Charlotte, N. C.**

Graver Theater

**Chattanooga, Tenn.**

Tivoli Theater

**Chelsea, Mass.**

Olympia Theater

**Chicago, Ill.**

Alvernia High School  
 Apollo Theater  
 Art Institute  
 Auditorium Theater  
 Austin High School  
 Banner Blue Lodge  
 Blackstone Theater  
 Capitol Theater  
 Carter Harrison High School  
 Central Park Theater  
 Crane Technical High School  
 Chicago Theater  
 Diversey Theater  
 Driscoll's Danceland  
 Garrick Theater  
 Goodman Hall, Art Institute  
 Granada Theater  
 Harding Theater  
 Harris Theater  
 Howard Theater  
 Hyde Park High School  
 Illinois Theater  
 K. C. of Memorial Bldg.  
 Lakeview High School  
 LaSalle Theater  
 McVicker's Theater  
 Marshall Square Theater  
 Medinah Temple  
 Mercy High School  
 Milwaukee Sawyer Theater  
 Municipal Auditorium Tuberculosis Sanitarium  
 Nicholas Senn High School  
 Olympic Theater  
 Orchestra Hall  
 Palace Theater  
 Pantheon Theater  
 People's Theater  
 Pershing Palace Cafe  
 Princess Theater  
 Ravinia Theater  
 Riviera Theater  
 Roosevelt Theater  
 Sawyer Theater  
 Selwyn Theaters  
 Senate Theater  
 State-Lake Theater  
 Stratford Theater  
 Studebaker Theater  
 Terminal Theater  
 Tivoli Theater  
 Uptown Theater  
 West Englewood Theater  
 Willibrink Theater  
 Woods Theater  
 Woodlawn Theater

**Chicago Heights, Ill.**

Lincoln-Dixie Theater

**Chisholm, Minn.**

Chisholm Jr. High School

**Cincinnati, Ohio**

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 Olympic Theater  
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 Lyric Theater  
 Palace Theater  
 Strand Theater  
 Walnut Theater

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F. R. Moore Theater  
 Robinson Grand Theater

**Cleveland, Ohio**

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 Columbia Theater  
 Hanna Theater  
 Heights Masonic Temple  
 Hippodrome Theater  
 Keith's Palace  
 Keith's 105th St. Theater  
 Keith's Theater  
 Masonic Temple  
 Old B. of L. E. Bldg.,  
 Auditorium  
 Loew's Park  
 State Theater  
 Stillman Theater  
 Woodward Masonic Temple

**Clinton, Mass.**

Philbin Theater

**Clinton, Okla.**

New Theater

**Coffeyville, Kansas**

Coffeyville High School

**Columbus, Miss.**

Princess Theater

**Columbus**

James Theater

**Concord, Mass.**

Concord Armory  
 Concord Masonic Temple

**Council Bluffs, Iowa**

Broadway Theater

**Dallas, Texas**

Fair Park Auditorium  
 Hope Theater  
 Majestic Theater  
 Methodist Church  
 Palace Theater

**Danville, Ill.**

Danville High School

**Davenport, Iowa**

Capitol Theater

**Dayton, Ohio**

B. F. Keith's Theater  
 Masonic Temple

**Deland, Fla.**

Deland Amusement Co.

**Denver, Colo.**

America Theater  
 Colorado Theater  
 Consistory  
 Denham Theater  
 El Jebel Theater  
 Rivoli Theater  
 Victoria Theater



**Des Moines, Iowa**

Alhambra Theater  
Theater & Office Building  
Women's Club

**Detroit, Mich.**

Adams Theater  
Broadway Strand Theater  
Book Cadillac Hotel  
Cass Technical High School  
Castle Theater  
Central High School  
Cinderella Theater  
Colonial Theater  
Dawn Theater  
Detroit Edison Auditorium Bldg.  
Detroit Masonic Temple  
Detroit Opera House  
Eastern High School  
Ferry Field Theater  
General Motors Building  
Grand Riveria Theater  
Grande Theater  
Harmony Theater  
Holy Redeemer Church  
Hotel Tuller  
Hutchins School  
I. O. O. F. Temple  
Joyce School  
Jesse Bonstelle Playhouse  
Kovinsky Theater  
Keith's Theater  
Madison Theater  
Masonic Temple  
Meretsky Theater  
Miller School  
National Theater  
Nordstrom School

**Detroit (Continued)**

Orchestra Hall  
Play House  
Plaza Theater  
Rivoli Theater  
Sacred Heart Academy High School  
Tuxedo Theater

**East St. Louis, Ill.**

Lyric Theater  
Masonic Temple

**Easton, Pa.**

Wilmer & Vincent

**Eldorado, Ark.**

Eldorado High School

**Elgin, Ill.**

Rialto Theater

**Elizabeth, N. J.**

Regent Theater

**Elkhart, Ind.**

Elkhart High School

**Elmira, N. Y.**

State Theater

**Elmhurst, L. I., N. Y.**

Elks Lodge

**Eureka, Kans.**

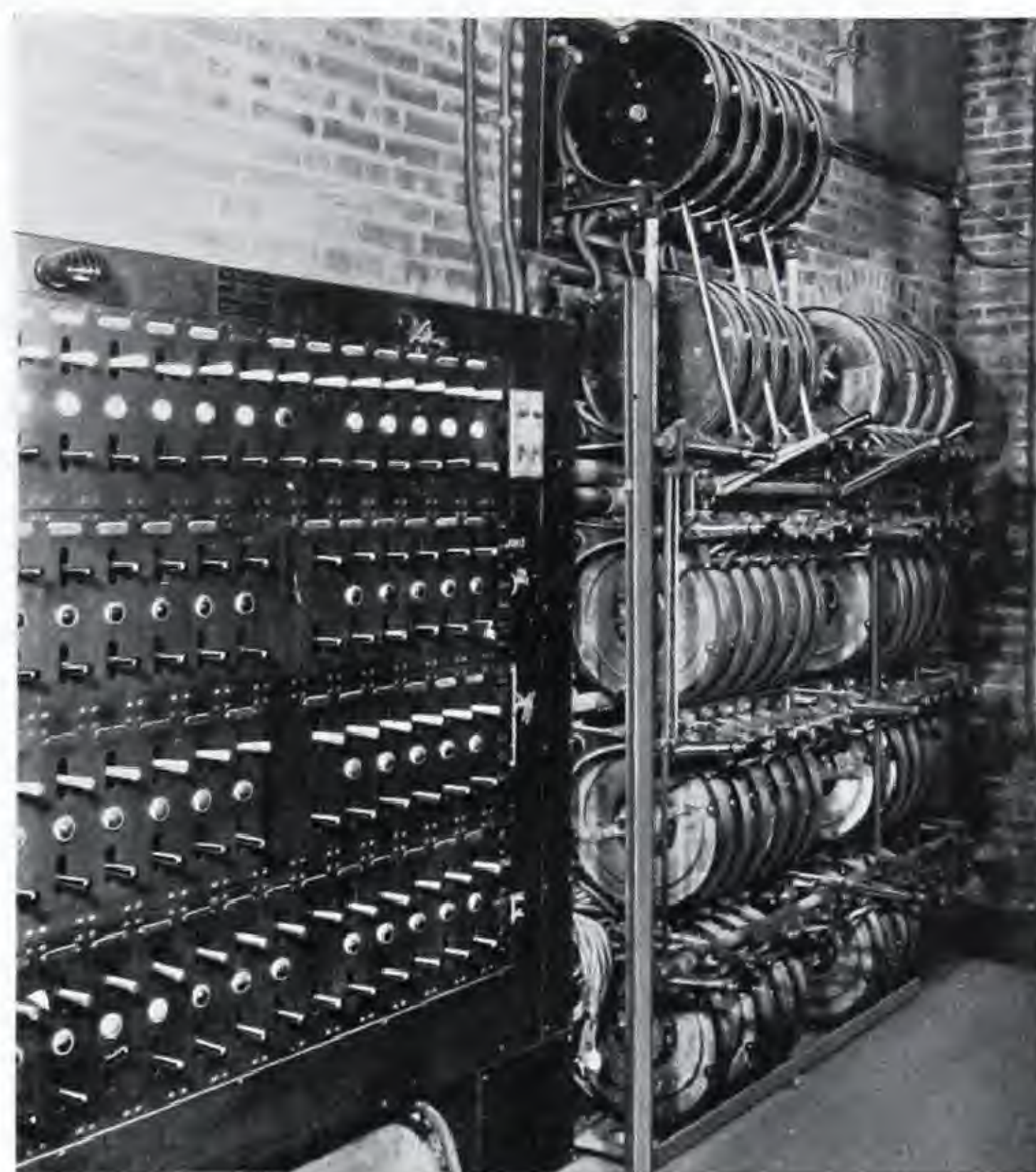
Memorial Home

**Evansville, Ind.**

Victory Theater

**Everett, Wash.**

Everett Theater  
Elks Club



Showing the banks of "Simplicity" Theater Dimmers which control the lighting in the B. F. Keiths Rialto Theater, Louisville, Ky. The board is a Major (F. A.)



Showing C-H Dimmer installation at the Repertory Theater, Boston.

**Fairmont, W. Va.**

Fairmont Theater  
Virginia Theater

**Fall River, Mass.**

Empire Theater

**Flint, Mich.**

Flint High School

**Fort Madison, Iowa**

High School

**Fort Scott, Iowa**

Masonic Temple

**Fort Scott, Kans.**

Ancient Order Scottish Rite

**Ft. Wayne, Ind.**

Masonic Temple  
Mizpah Temple

**Fox River Grove, Ill.**

Fox River Grove Dance Hall

**Framingham, Mass.**

W. George Theater

**Freeport, Ill.**

Dittman Theater

**Fresno, Calif.**

Wilson Theater

**Fullerton, Calif.**

Chapman Theater

**Gardiner, Me.**

Gardiner Theater

**Greensburg, Pa.**

Strand Theater

**Hammond, Ind.**

Parthenon Theater

**Hanford, Calif.**

Hanford Civic Auditorium

**Hanover, N. H.**

Dartmouth College

**Harrisburg, Pa.**

Orpheum Theater

**Hartford, Conn.**

Polis Theater  
State Library

**Haverhill, Mass.**

Academy of Music

**Hibbing, Minn.**

Hibbing High School

**Hinsdale, Ill.**

St. Joseph's Seminary

**Holyoke, Mass.**

Masonic Temple  
Victory Theater

**Hamilton, Ohio**

Scottish Rite

**Honolulu, Hawaii**

Alpha Theater

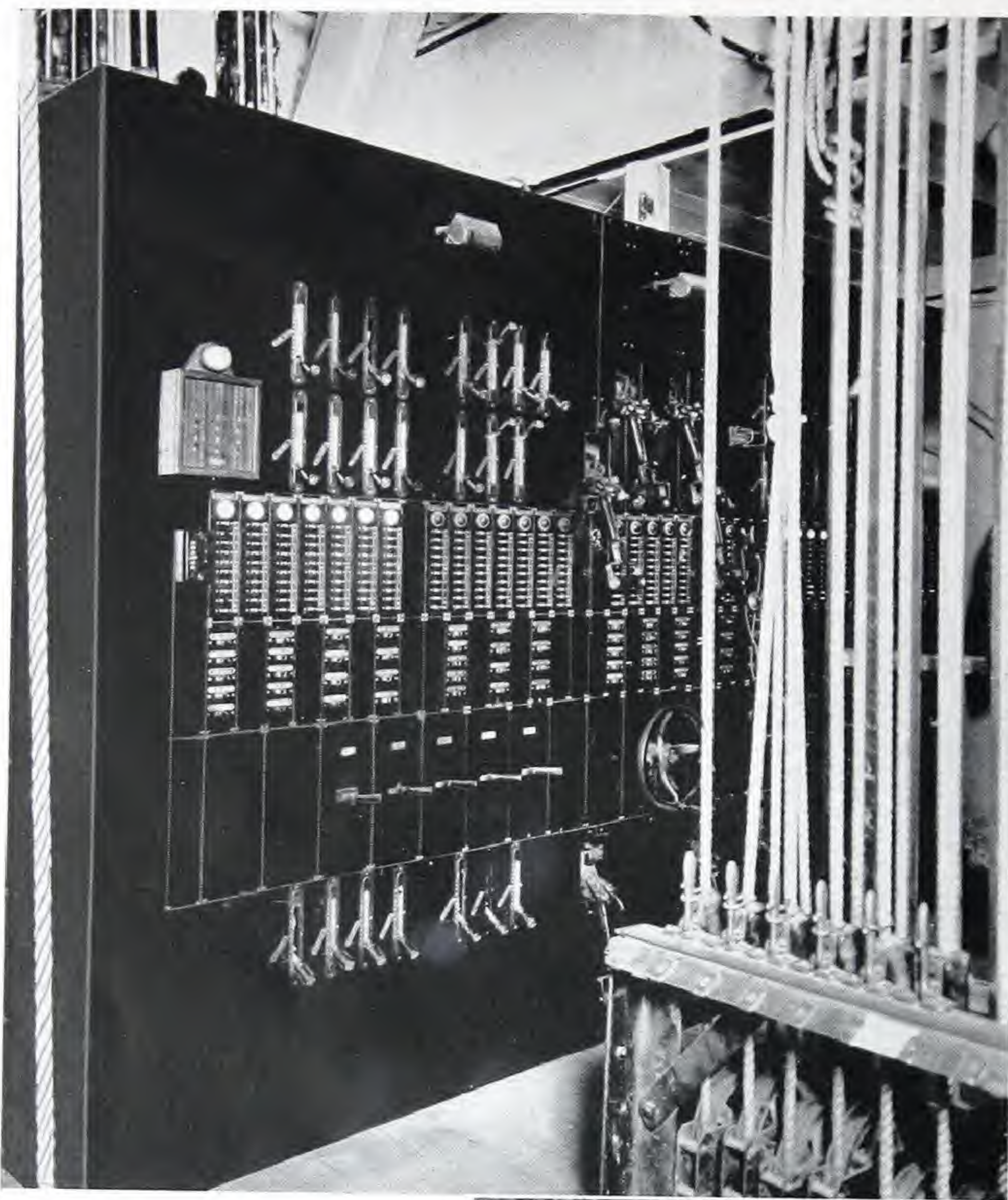
**Hoquiam, Wash.**

Masonic Temple

**Houston, Texas**

Auditorium Theater  
Majestic Theater  
Scottish Rite Cathedral





*Dead front panels at the  
Pantheon Theater, Chicago.  
C-H Dimmers used.*

Joplin, Mo.  
Mirza Temple  
Missouri Memorial Hall

Kansas City, Kansas  
New High School

Kansas City, Mo.  
Central Junior High School  
Main St. Orpheum Jr. Theater  
Westport Jr. High School

Keokuk, Iowa  
Grand Theater

Lake Charles, La.  
Masonic Temple

La Grange, Ill.  
New High School

Lake Worth, Fla.  
Masonic Temple

Lansing, Mich.  
Strand Theater

Lawrence, Mass.  
Lawrence Masonic Temple  
Majestic Theater  
Palace Theater

Lebanon, N. H.  
Lebanon Town Hall

Hyannis, Mass.  
Hyannis Masonic Temple

Hyrum, Utah  
South Cache High School

Indianapolis, Ind.  
Circle Theater  
Loew Theater

Inglewood, Calif.  
Inglewood Union High School

Iola, Kansas  
Scottish Rite Temple  
Memorial Building

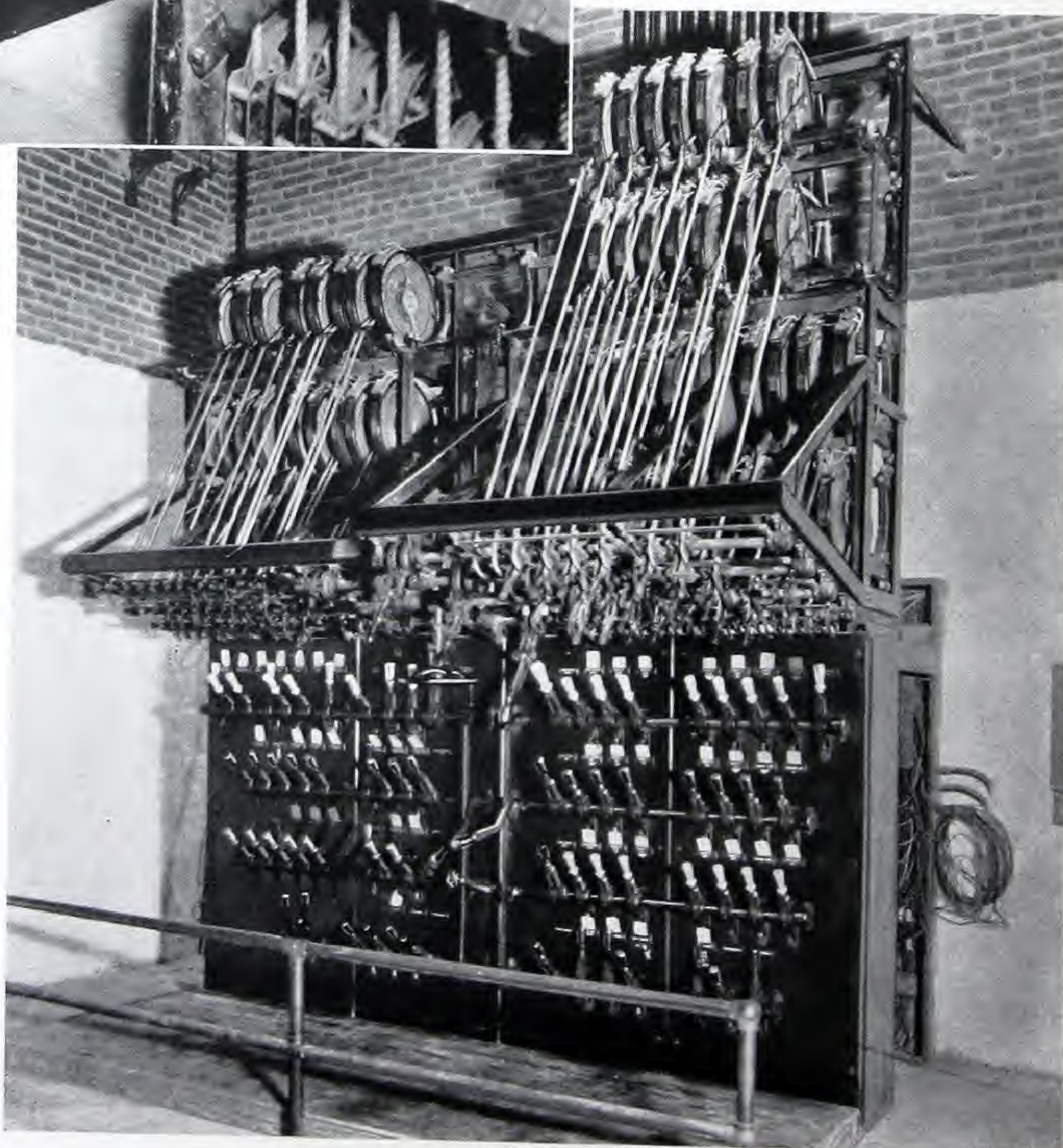
Jackson, Miss.  
Masonic Temple

Jefferson City, Mo.  
Miller's Theater

Jersey City, N. J.  
Central Theater  
Keith's Theater

Joliet, Ill.  
Joliet Township High School  
New Royal Theater

*Another above-the-board in-  
stallation of C-H "Simplicity"  
Dimmers — in the DeWitt  
Theater, Bayonne, N. J.*







**Leomenster, Mass.**  
Leomenster Theater

**Lexington, Ky.**  
Lafayette Theater

**Libby, Mont.**  
Kootenai Theater

**Lincoln, Nebr.**  
Capital Theater  
Lincoln Theater  
Whittier Jr. High School

**Logan, Utah**  
Capital Theater

**Long Beach, Calif.**  
Fairyland Theater

**Long Island City, N. Y.**  
Jackson Heights Theater

**Longview, Wash.**  
Columbia Theater

**Los Angeles, Calif.**  
Apollo Theater  
Bard's Hillstreet Theater  
Bard's Hollywood Theater  
California Theater  
Forum Theater  
Foshay High School  
Grauman's Egyptian Theater  
Grauman's Million Dollar Theater  
Hillstreet Junior Theater  
Majestic Theater  
Mason Opera House  
Methodist Church  
Orpheum Theater  
Pantages Theater  
Vermont Theater  
Wilshire Theater

**Louisville, Ky.**  
Atherton High School  
Brown Theater  
Elks Club  
Rialto Theater

**Lowell, Mass.**  
Lowell High School  
Opera House  
Strand Theater

**Lynbrook, L. I., N. Y.**  
Lynbrook Theater

**Lynchburg, Va.**  
Academy Theater  
Marshall Lodge No. 39  
Masonic Temple

**Mahanoy City, Pa.**  
Princess Theater

**Malden, Mass.**  
Malden Auditorium

**Manchester, N. H.**  
Colonial Theater  
Keith's Theater  
Manchester High School  
Practical Arts High School  
West Side Junior High School

**Mankato, Minn.**  
Teachers' College

**Marlboro, Mass.**  
Rock Theater

**McKeesport, Pa.**  
White's Hippodrome

**Medford, Wash.**  
Craterian Theater

**Memphis, Tenn.**  
McWilliams Theater  
Memphis Auditorium and Market House

**Miami, Fla.**  
Miami Theater

**Milwaukee, Wis.**  
Alhambra Theater  
Arcadia Ball Room  
Bay View High School  
Butterfly Theater  
Crystal Theater  
Davidson Theater

**Milwaukee (continued)**  
Miller Theater  
Milwaukee Auditorium  
Milwaukee Normal School  
Milwaukee Theater  
Pabst Theater  
Palace Theater  
Parkway Theater  
Princess Theater  
Regent Theater  
Riverside High School  
Saxe Theater  
Strand Theater  
Washington High School  
Wauwatosa High School  
West Allis High School  
Wisconsin Theater

**Montreal, Canada**  
Metropolitan Theater  
Capitol Theater

**Morgantown, W. Va.**  
Comuntzis Theater  
Strand Theater

**Mt. Clemens, Mich.**  
McComb Theater

**Mt. Union, Pa.**  
Shapiro Theater

**Mount Vernon, N. Y.**  
Proctor's Theater

**Nashville, Tenn.**  
Scottish Rite Temple

**Nevada, Mo.**  
New High School

**Newark, N. J.**  
Branford Theater  
Loew's Theater  
Newark Theater  
Proctor's Theater  
Rialto Theater  
Schubert Theater

**New Bedford, Mass.**  
Olympia Theater  
Zeitz Theater

**New Bern, N. C.**  
Masonic Temple

**New Castle, Pa.**  
Scottish Rite Cathedral

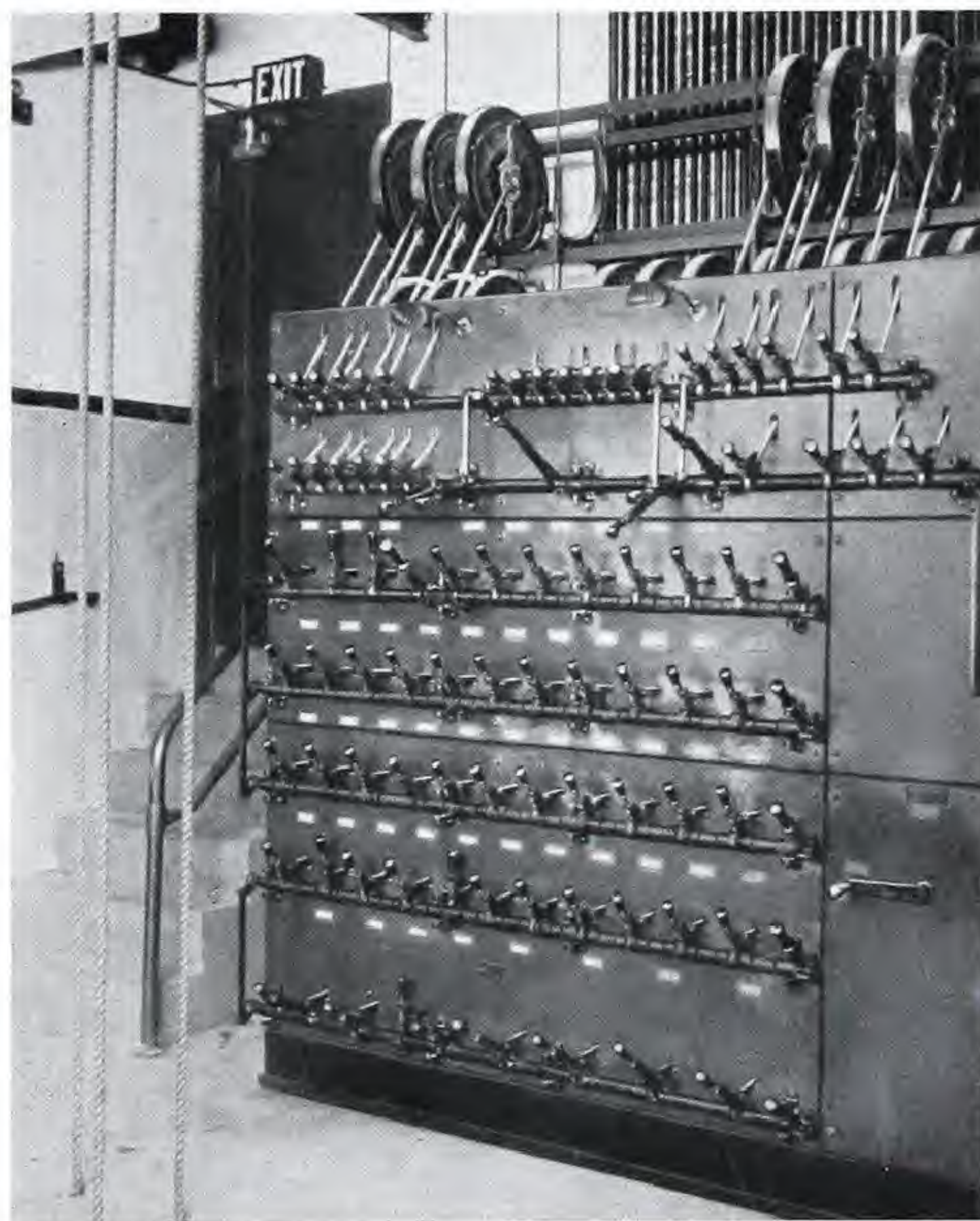
**New Haven, Conn.**  
Bijou Theater  
Hyperion Theater  
Fair Haven Masonic Temple

**New Orleans, La.**  
Elks Club  
Loew's Theater

**Newport, R. I.**  
Newport Naval Training Station

**Newton, Mass.**  
Community Theater

**New York City, N. Y.**  
Academy of Music  
Al Jolson Theater  
Alhambra Theater  
Ambassador Theater  
American Theater  
Arcadia Ball Room  
Astor Theater  
Beck's West Side Theater  
Belmont Theater  
Birkeley Theater  
Bijou Theater  
Bijou Dream Theater  
Booth Theater  
Bowery Savings Bank  
Broadway Theater  
Broadhurst Theater  
Cameo Theater  
Capitol Theater  
Cathedral of St. John, the Divine  
Chamber of Commerce  
Channin's 46th St. Theater  
Circle Theater  
Cohan & Harris Theater  
Comedy Theater  
Columbia Theater

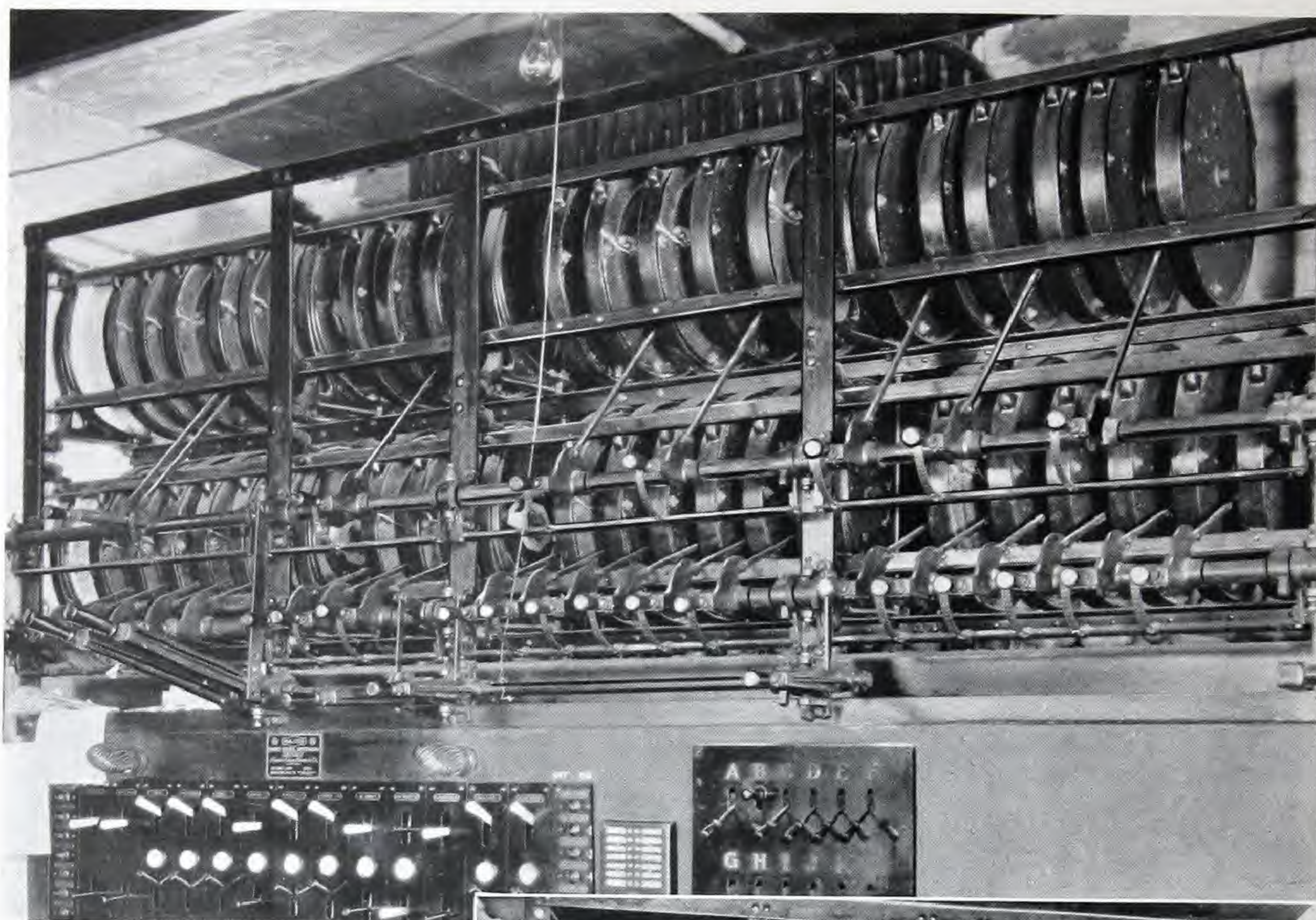


*Switchboard and C-H Dimmers in the Orchestra Hall, Detroit, Michigan.*

**Milwaukee (continued)**  
Empire Theater  
Excelsior Masonic Lodge  
Gaiety Theater  
Garden Theater  
Garfield Masonic Lodge  
Garrick Theater  
Ivanhoe Masonic Temple  
Juneau Theater  
Kenwood Masonic Lodge  
Kilbourn Masonic Lodge  
Layton Park Theater  
McKinley Masonic Lodge  
Majestic Theater  
Marigold Gardens  
Merrill Theater  
Modjeska Theater

**Minneapolis, Minn.**  
Bryant Jr. High School  
Hennepin Theater  
Jefferson Jr. High School  
John Marshall High School  
Jordan Jr. High School  
Lincoln Jr. High School  
Loeb Arcade  
Minneapolis Jr. Orpheum Theater  
Music Hall, University o Minn.  
Northeast High School  
Roosevelt High School  
State Theater  
Washburn Junior High School



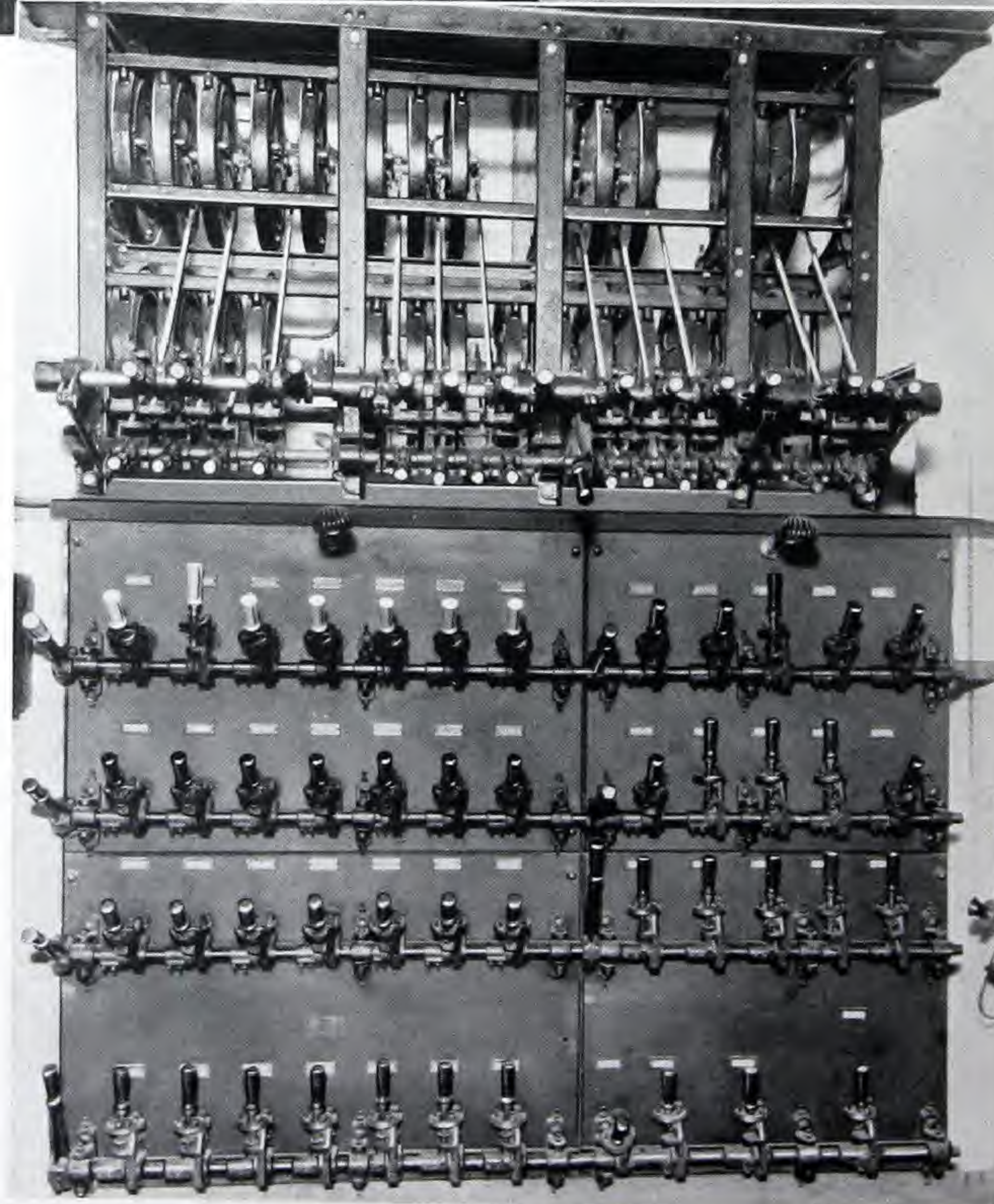


*The C-H "Simplicity" Dimmer installation at Keith's, 105th Street Theater, Cleveland, Ohio.*

**New York City (Cont'd)**

Colonial Theater  
 Criterion Theater  
 Crotona Theater  
 Daly's Theater  
 Delancey Theater  
 Dutchess Theater  
 Earl Carroll Theater  
 Eighty-sixth St. Theater  
 Endicott Johnston Theater  
 Federal Reserve Bank  
 42nd St. Theater  
 Fifth Avenue Theater  
 Finnish Workers' Association  
 43rd St. Theater  
 Forty-eighth St. Theater  
 Forty-ninth St. Theater  
 Fordham Theater  
 Fulton Theater  
 Gaiety Theater  
 Garden Theater  
 Garrick Theater  
 George M. Cohan Theater  
 Globe Theater  
 Grand Opera House

*An installation of Cutler-Hammer Dimmers in the Jesse Bonstelle Playhouse, Detroit, Mich. Switch-board built by (Mutual.)*





**New York City (Cont'd)**

Grand Theater  
Greeley Square Theater  
Hammerstein's Lexington  
Theater  
Harlem Opera House  
Henry Miller's Theater  
Hippodrome  
Hudson Theater  
Hurtig Seamon Theater  
International House  
Irving Place Theater  
Knickerbocker Theater  
League of Political Education  
Liberty Theater  
Lincoln Theater  
Little Theater  
Loew's Boulevard Theater  
Loew's State Theater  
Lyceum Theater  
Lyric Theater  
Maxine Elliot Theater  
Manhattan Opera House  
McAlpin Hotel  
McKinley Square Theater  
Metropolitan Opera House  
Miner's Bowery Theater  
Miner's 8th Ave. Theater  
Morosco Theater  
Murray Hill Theater  
Music Box Theater  
National Cloak & Suit  
New Amsterdam Theater  
New York Theater  
95th St. School

**New York City (Cont'd)**

Olympic Palace Theater  
160th St. and Broadway  
Theater  
Palais Royal Theater  
Palace Theater  
Paramount Theater  
Park Savings Bank  
Park Theater  
People's Theater  
Pennsylvania Hotel  
Playhouse Theater (part)  
Plaza Hotel  
Plymouth Theater  
Proctor's 23rd St. Theater  
Proctor's 28th St. Theater  
Proctor's 58th St. Theater  
Proctor's 125th St. Theater  
Republic Theater  
Rialto Theater  
Rivoli Theater  
Selwyn Theater  
Schubert's 59th St. Theater  
Sheridan Square Theater  
Shubert-Belasco Theater  
Steinway & Sons  
Star Theater  
Strand Theater  
Third Ave. Theater  
Thirty-ninth St. Theater  
Tremont Theater  
Vanderbilt Theater  
Victoria Theater  
Wadsworth Theater  
Ward's Island Auditorium

**New York City (Cont'd)**

Warren Library Theater  
West End Theater  
Waldorf-Astoria Theater  
Weber's Theater  
Yorkville Theater  
5th Avenue Baptist Church

**Niagara Falls, N. Y.**

Bellevue

**Northampton, Mass.**

Calvin Theater  
Masonic Temple

**Norwich, Conn.**

Palace Theater

**Oakland, Calif.**

Civic Auditorium  
Roosevelt High School  
Mount Clymonds High School  
University High School

**Ocean Park, Calif.**

Rosemary Theater  
Dome Theater

**Ogden, Utah**

Peery's Egyptian Theater

**Oklahoma City, Okla.**

Masonic Temple  
Auditorium  
Criterion Theater

**Olympia, Wash.**

Capitol Theater  
Liberty Theater

**Omaha, Nebr.**

Commercial & Technical  
High School  
Knights of Columbus Building  
Moon Theater  
North Side High School  
Suburban Theater  
Worlds Realty Theater

**Ottawa, Canada**

Loew's Theater

**Parkersburg, W. Va.**

Masonic Temple

**Parsons, Kansas**

High School  
Municipal Building

**Pasadena, Calif.**

Scottish Rite Cathedral

**Passaic, N. J.**

Montauk Theater  
Rialto Theater

**Pawtucket, R. I.**

Leroy Theater

**Penn Yan, N. Y.**

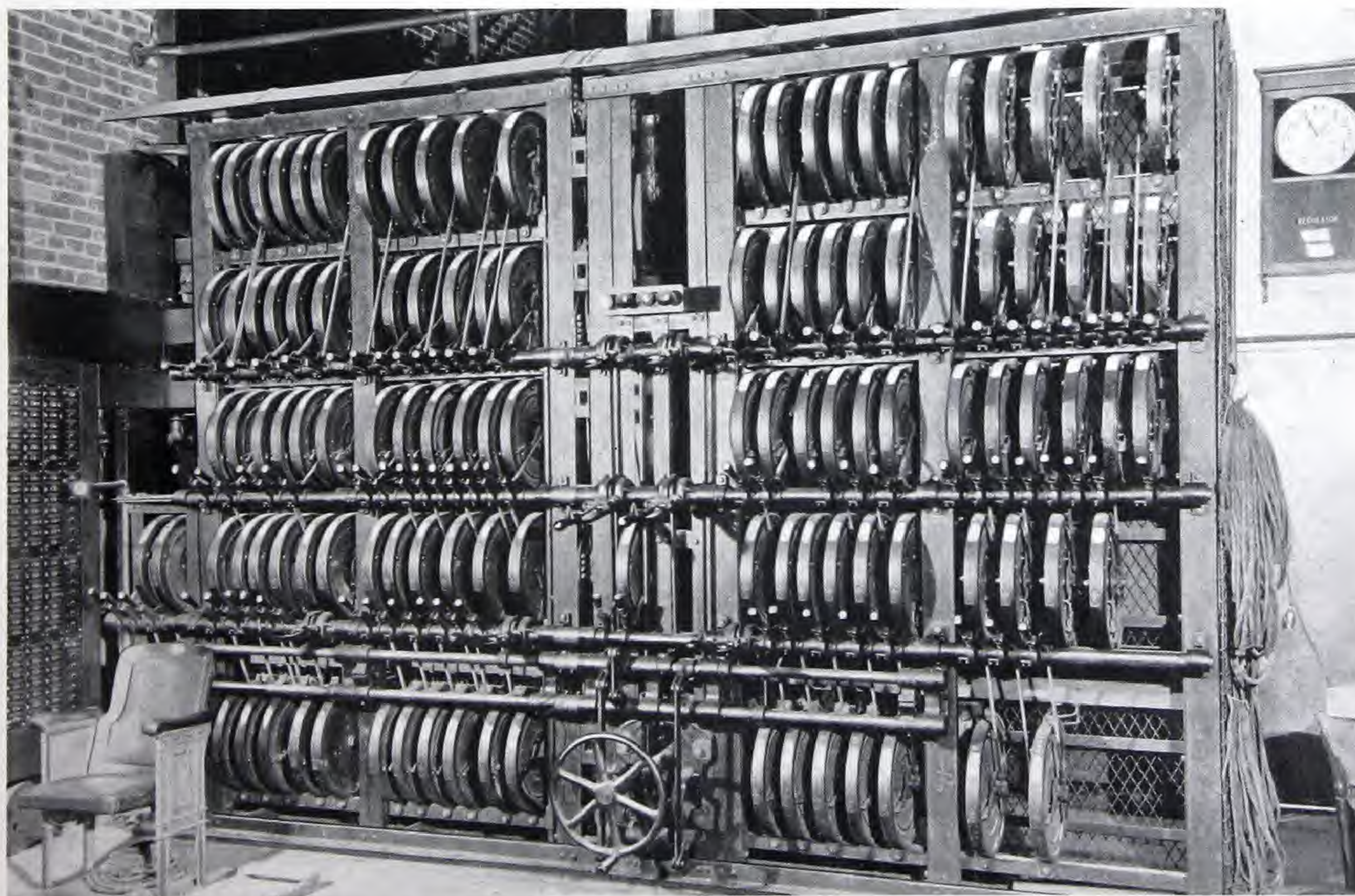
Elmwood Theater

**Pensacola, Fla.**

Pensacola Theater  
Saenger Theater

**Peoria, Ill.**

Ascher's Palace Theater



Showing five banks of C-H "Simplicity" Dimmer Plates provided with a master slow motion hand wheel drive — in the Lafayette Theater, Buffalo.



**Philadelphia, Pa.**

Academy of Music  
Adelphi Theater  
Allegheny Theater  
Belmont Theater  
Broad Street Theater  
Broadway Theater  
Casino Theater  
Chestnut St. Opera House  
Colonial Theater  
Sumont's Theater  
Forrest Theater  
Frankford Theater  
Garrick Theater  
Gayety Theater  
Grand Opera House  
Keith's Theater  
Keystone Theater  
Knickerbocker Theater  
Liberty Theater  
Lyric Theater  
Masonic Temple  
Metropolitan Opera House  
Orpheum Theater  
Palace Theater  
People's Theater  
69th Street Theater  
Standard Theater  
Strand Theater  
Stanley Theater  
Shubert Theater  
Trocadero Theater  
Victoria Theater  
Walnut Theater  
Wm. Penn Theater

**Phillipsburg, Pa.**

Towland Theater

**Pine Bluff, Ark.**

Pine Bluff Theater  
Saenger Theater

**Pittsburgh, Pa.**

Academy  
Alvin  
Gayety  
Carnegie Institute of  
Technology  
Davis  
Grand  
Harris  
Heinz Auditorium  
Liberty  
Loew's Aldine  
Masonic Temple  
Nixon  
Olympic  
Pershing Theater  
Pitt Theater  
Schenley Theater  
Spang Chalfant Community  
House  
Syria Mosque  
Palace Theater

**Pittsfield, Mass.**

Union Square Theater

**Plainfield, N. J.**

Bijou

**Pocatello, Idaho**

Idaho Technical Institute

**Pontiac, Mich.**

Strand Theater

**Pomona, Calif.**

Pomona High School

**Portland, Me.**

Deering High School

**Portland, Ore.**

Alhambra Theater  
American Theater  
Portland Auditorium  
Bob White Theater  
Blue Mouse Theater  
Circle Theater  
Columbia Theater  
Egyptian Theater  
Hawthorne Theater  
Heilig (also known as  
Orpheum) Theater  
Hippodrome Theater  
Hudson Colonial Theater  
Irvington Theater  
Jefferson Theater  
Laurelhurst Theater  
Liberty Theater

**Quincy, Mass.**

Alhambra Theater  
Quincy Theater

**Racine, Wis.**

Memorial Hall

**Reading, Pa.**

Rajah Temple

**Richmond, Utah**

North Cache High School

**Richmond, Va.**

Colonial Theater  
National Theater

**Roanoke Rapids, N. C.**

Peoples Theater

**Rochester, N. Y.**

Eastman School of Music  
Piccadilly  
Temple

**St. Louis (Continued)**

Criterion Theater  
Empress Theater  
King's Theater  
Lindell Theater  
Loew's State Theater  
Missouri Theater  
Moolah Temple  
Municipal Theater  
New Grand Central Theater  
Orpheum Theater  
Pageant Theater  
Pershing Theater  
Rialto Theater  
Rivoli Theater  
St. Anthony School  
St. Louis Theater  
Scottish Rite Cathedral  
West End Lyric Theater

**St. Paul, Minn.**

Capitol Theater

**Salem, Mass.**

Salem Masonic Temple

**Salina, Kans.**

Memorial Building

**Salt Lake City, Utah**

Pantages Theater  
Elks' Building  
Masonic Temple  
West High School  
East High School  
Orpheum Theater  
Wilkes Theater

**San Antonio, Texas**

Auditorium

**San Diego, Calif.**

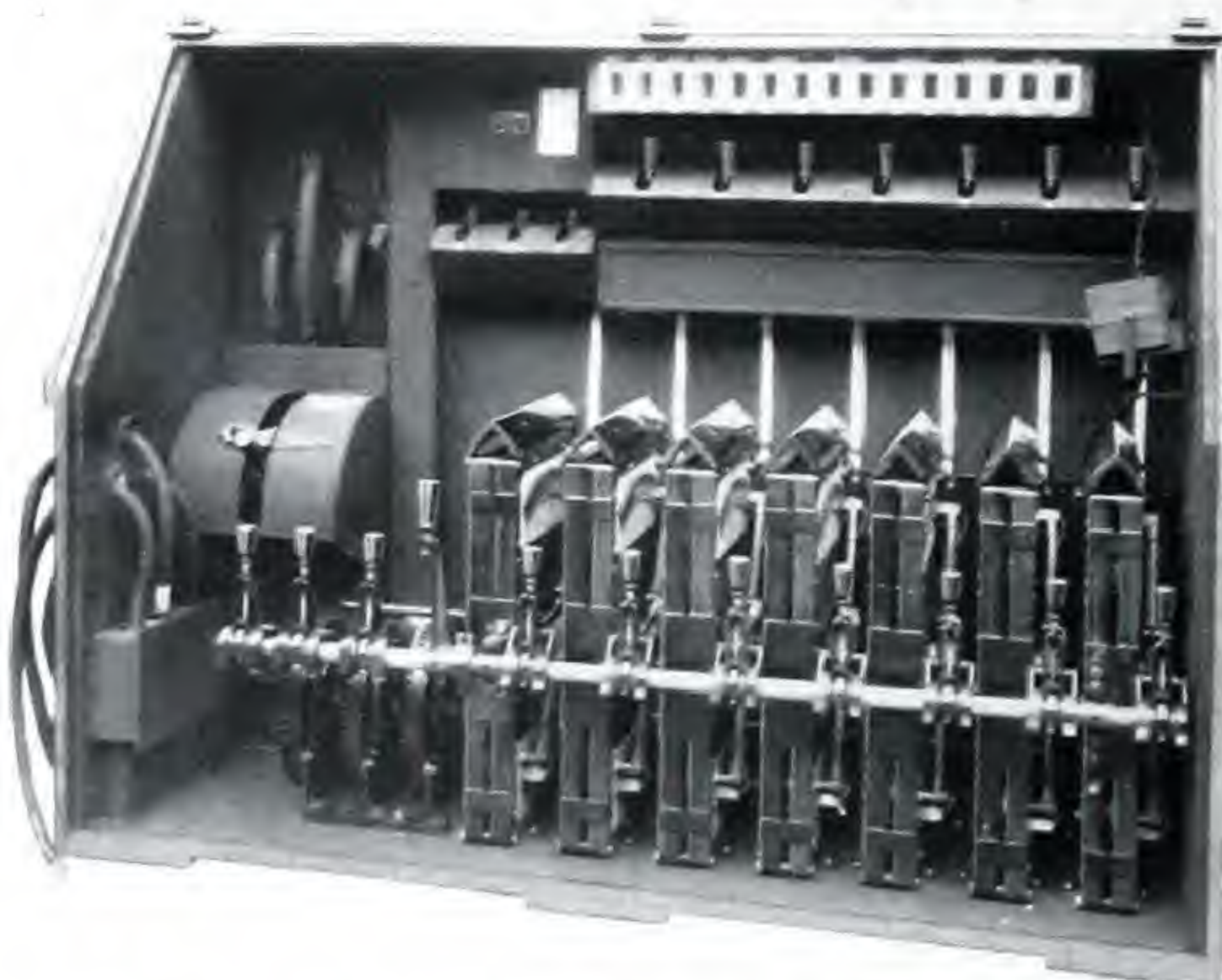
Balboa Theater  
Pantages Theater

**Sanford, Me.**

Sanford Masonic Temple

**San Francisco, Calif.**

Alcazar Theater  
California Palace of the  
Legion of Honor  
California Body Scottish Rite  
Temple  
Civic Auditorium  
Columbia Theater  
Capitol Theater  
Casino Theater  
Cameo Theater  
Curran Theater  
Egyptian Theater  
Fairmont Hotel  
Golden Gate Jr. Theater  
~~Granada Theater~~  
Imperial Theater  
Loew's Warfield Theater  
New Fillmore Theater  
New Mission Theater  
Orpheum Theater  
Orpheum Jr. Theater  
Palace Hotel  
Pantages Theater  
President Theater  
Republic Theater  
San Francisco Body Scottish  
Rite Temple  
St. Francis Hotel  
St. Francis Theater  
Union Square Theater  
Wilkes Theater  
Women's Club



*High capacity ventilated type portable dimmer manufactured by C-H and assembled in shipping and operating cabinet by Display Stage Lighting Co., New York.*

**Portland (Continued)**

Majestic Theater  
Nob Hill Theater  
Pantages Theater  
People's Theater  
Rivoli Theater  
Sellwood Theater  
Victoria Theater  
Walnut Park

**Portsmouth, N. H.**

Colonial Theater  
Pastime Theater

**Providence, R. I.**

Emory Theater  
Keith's Theater  
Majestic Theater  
Modern Theater  
Strand Theater

**Provo, Utah**

Meno Trope Memorial High  
School  
Provo High School

**Rock Island, Ill.**

Fort Armstrong Theater

**Rock Springs, Wyo.**

Elysium Theater

**Roslindale, Mass.**

Roslindale Masonic Temple

**Roxbury, Mass.**

Elliott Hall  
Hibernian Hall  
Hyde Square Theater

**Saginaw, Mich.**

Saginaw Central Jr. High  
School

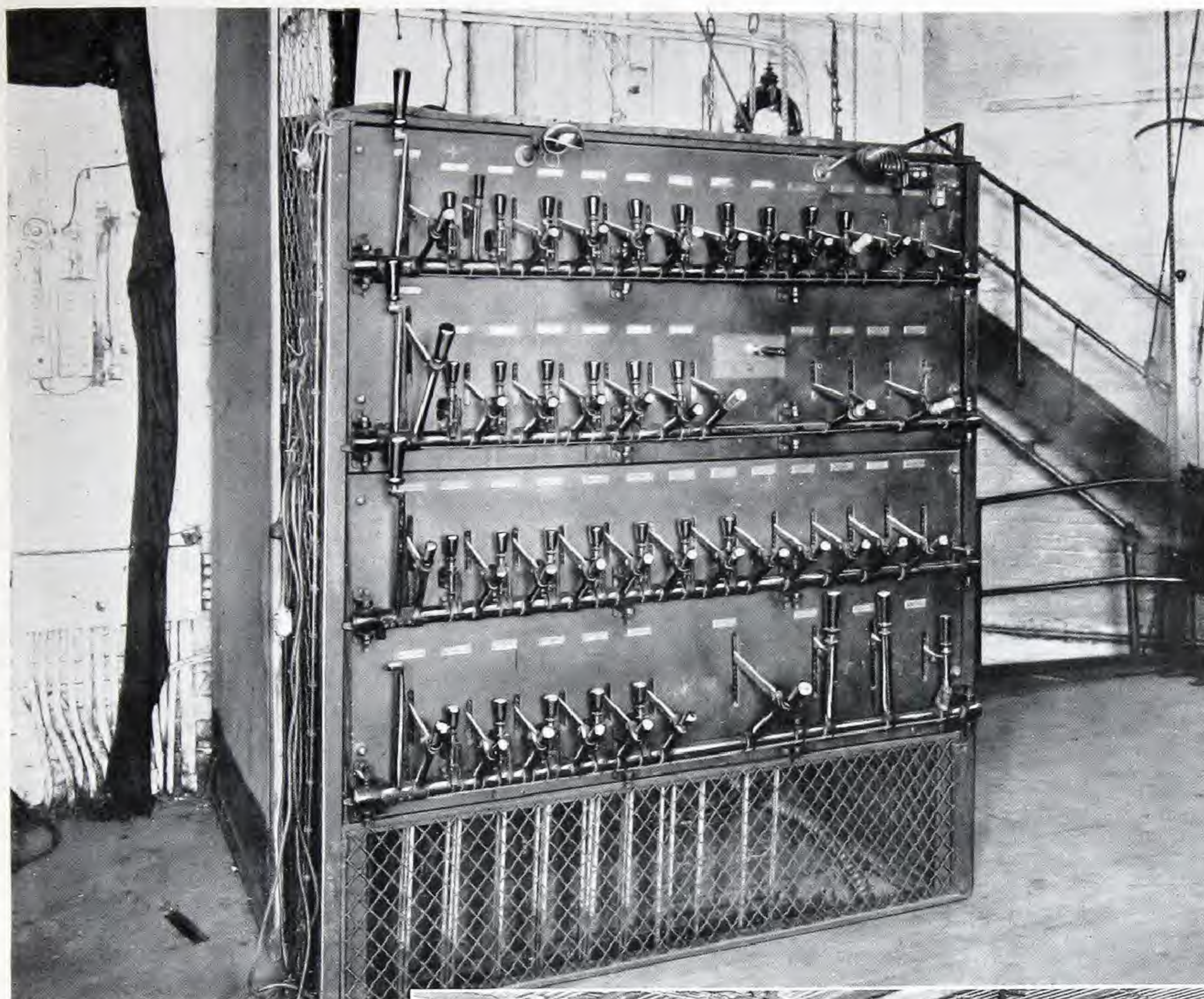
**St. Cloud, Minn.**

Schaeffer Theater

**St. Louis, Mo.**

American Theater  
Capital Theater  
Chase Hotel  
Cinderella Theater  
Coronado Hotel





*An unusual installation providing direct operation of the dimmer, with the plates in the basement and the dimmer levers on the stage is found in the Pitt Theater, Pittsburgh.*

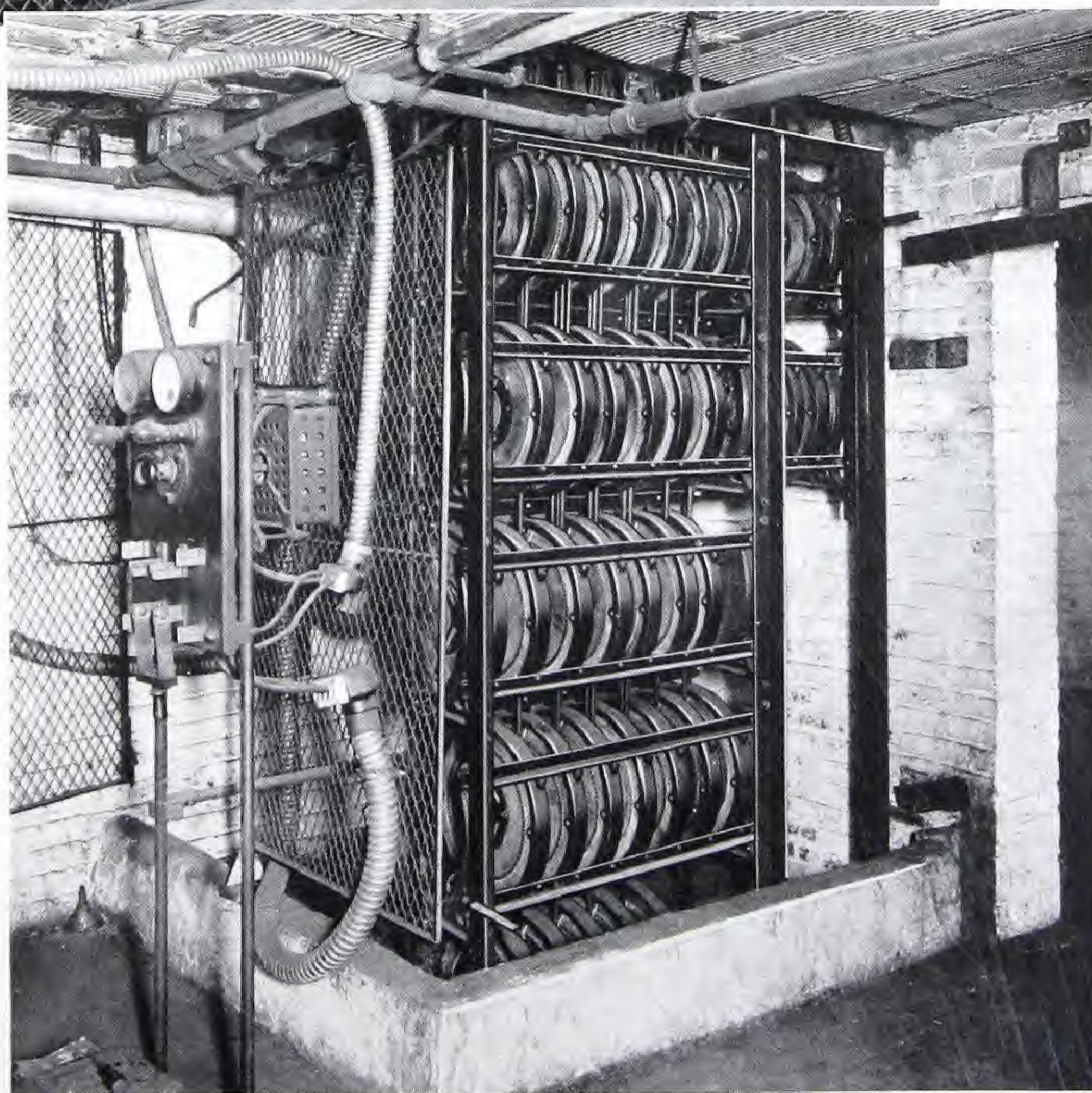
San Mateo, Calif.  
San Mateo Theater

Santa Barbara, Calif.  
LaBera Theater

Santa Monica, Calif.  
LaMonica Ballroom

Santa Rosa, Calif.  
Burbank Theater

Seattle, Wash.  
Angier Theater  
Blue Mouse Theater  
Broadway Theater  
Capitol Theater  
Coliseum Theater  
Columbia Theater  
Eagles Temple  
Finnish Club  
Franklin High School  
Garfield High School  
Heilig Theater  
Hollywood Theater  
Liberty Theater





**Seattle, (continued)**

Madrona Garden Theater  
Masonic Temple  
Metropolitan Theater  
Moore Theater  
Neptune Theater  
Palace Hippodrome Theater  
Paramount Theater  
Pantages Theater  
Queene Anne Theater  
Roosevelt High School  
Scottish Rite Cathedral  
Strand Theater  
Temple de Hirsh  
Winter Garden Theater

**Sharon, Pa.**

Columbia Theater

**Sheboygan, Wis.**

Sheboygan High School

**Sheffield, Ala.**

High School Auditorium

**Shreveport, La.**

Saenger Theater  
Shreveport Junior High School

**Sioux City, Iowa**

Masonic Temple

**Somerville, Mass.**

Somerville Theater  
Teale Square Theater

**So. Bend, Ind.**

Palace Theater

**South Hibbing, Minn.**

Elks Temple

**Spokane, Wash.**

Masonic Temple

**Springfield, Ill.**

Abraham Lincoln Hotel  
K. of C. Building

**Springfield, Mass.**

Broadway Theater  
Capitol Theater  
Elks' Lodge  
Masonic Temple

**Springfield, Ohio**

Masonic Temple

**Steubenville, Ohio**

Grand Theater  
Victoria Theater  
Masonic Hall  
K. or P. Hall

**Stockton, Calif.**

Civic Auditorium  
College of the Pacific

**Suffern, N. Y.**

Suffern Theater

**Syracuse, N. Y.**

B. F. Keith's Theater

**Tacoma, Wash.**

Elks Club  
Pantages Theater  
Rialto Theater

**Tamaqua, Pa.**

Majestic Theater

**Terre Haute, Ind.**

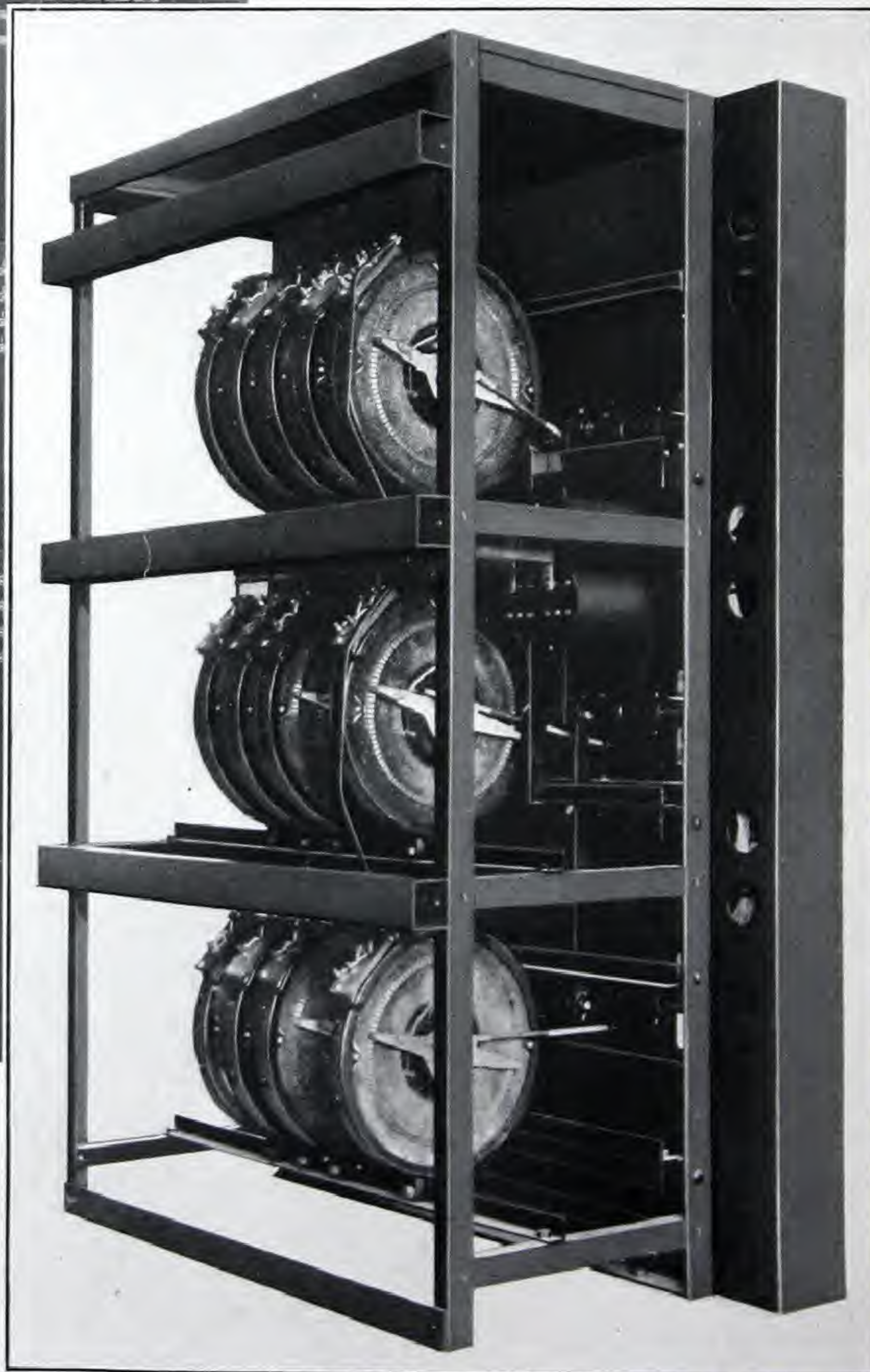
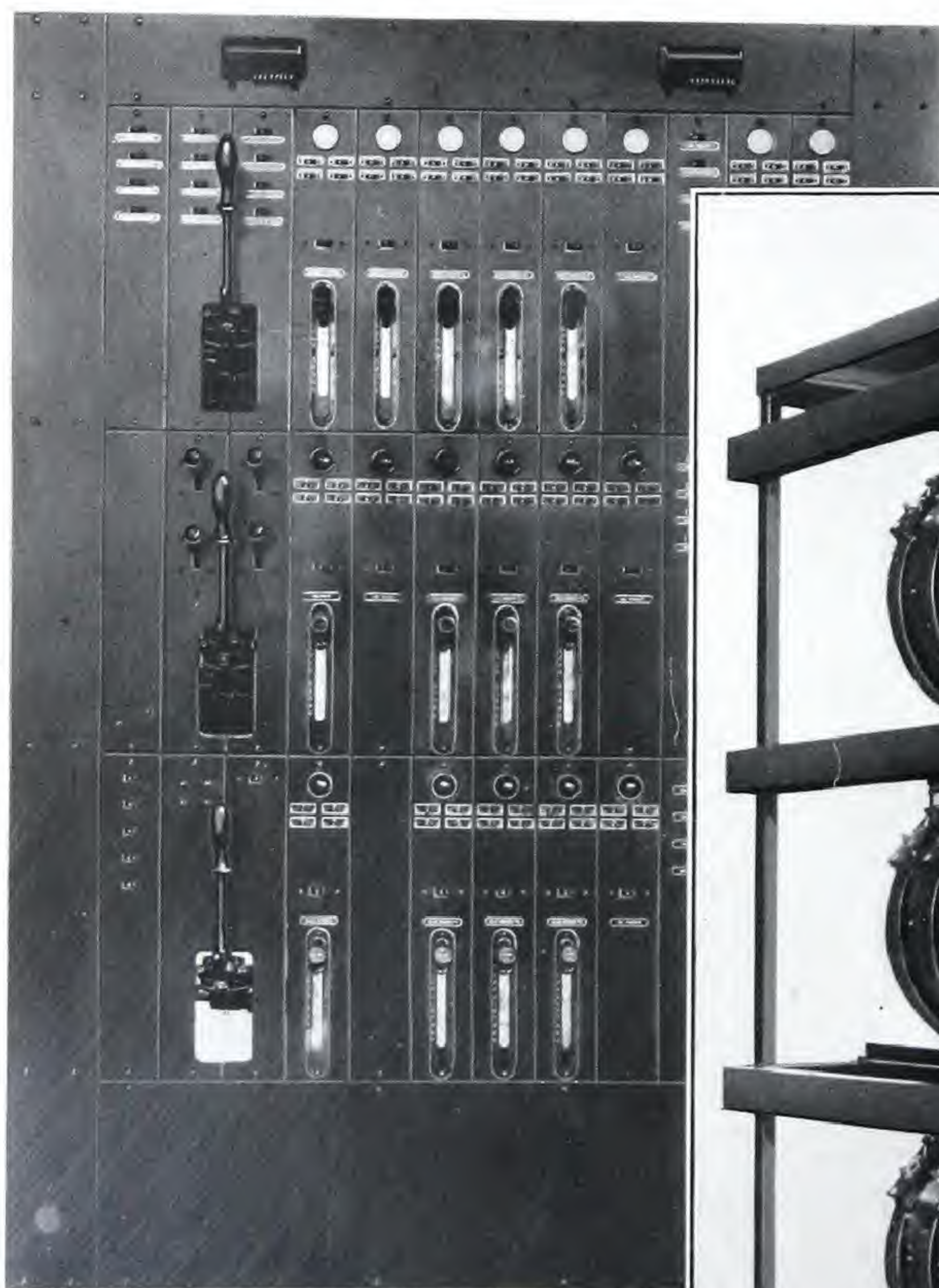
Indiana Theater

**Texarkana, Texas**

Saenger Theater

**Tipton, Iowa**

Consolidated High School



*Showing the Cutler-Hammer "Simplicity" Dimmer equipment and Major (F. A.) control board installed at the University of South Dakota. These views illustrate well, the direct, neat control provided by mounting the dimmers behind the board.*



<b>Toledo, Ohio</b> Rivoli Theater Regent Theater	<b>Utica, N. Y.</b> Colonial Theater Star Theater	<b>Watts, Calif.</b> Ferton Theater	<b>Winona, Minn.</b> State Teachers' College
<b>Topeka, Kans.</b> Masonic Temple Boswell School	<b>Venice, Calif.</b> Venice Ballroom	<b>Waynesburg, Pa.</b> Montgomery Building	<b>Worcester, Mass.</b> Masonic Lodge Park Theater Royal Theater Strand Theater
<b>Toronto, Canada</b> Pantages Theater	<b>Vermillion, South Dakota</b> University of South Dakota	<b>Webster City, Iowa</b> High School	<b>Yakima, Wash.</b> Liberty Theater
<b>Towanda, Pa.</b> Towanda Theater	<b>Waltham, Mass.</b> Waltham Masonic Temple	<b>Weirton, W. Va.</b> State Theater	<b>Yonkers, N. Y.</b> Benj. Franklin High School Gorton High School Nathaniel Hawthorne High School Theodore Roosevelt High School
<b>Troy, N. Y.</b> Troy Theater	<b>Warren, Ohio</b> Opera House	<b>Wellington, Kans.</b> Memorial Bldg.	<b>York, Pa.</b> Strand Theater
<b>Traverse City, Mich.</b> Lyric Theater	<b>Washington, Pa.</b> Capitol Theater Jefferson Theater	<b>Wellsburg, W. Va.</b> Masonic Hall	<b>Youngstown, Ohio</b> Hippodrome Park Theater Ursaline Convent
<b>Tulsa, Okla.</b> Akdar Temple Alhambra Theater New Orpheum Theater	<b>Washington, D. C.</b> B. F. Keith's Theater Palace Theater Wardman Park Theater	<b>Weston, Mass.</b> Municipal Bldg.	
<b>Upper Montclair, N. J.</b> Upper Montclair Theater Woman's Club	<b>Waterbury, Conn.</b> Duggan School Polis Theater	<b>Wheeling, W. Va.</b> Rex Theater Scottish Rite Cathedral	
	<b>Watertown, Mass.</b> Kingsley Theater	<b>Wichita, Kans.</b> High School Miller Amusement Co. Orpheum Jr. Theater	





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**Publication C-16**

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CCA





**C**UTLER-HAMMER Theater Dimmers are designed and constructed to stand up through years of continuous service, giving an unequalled perfection of illumination control at a maintenance cost that is practically nil. Their universal use in the finest and most modern theaters today is thus explained.

Expert illumination engineers on the Cutler-Hammer staff, are ready and glad at all times to assist with professional advice on problems of lighting control.

The CUTLER-HAMMER Mfg. Co.  
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